WEST VIRGINIA UNIVERSITY CATALOGUE

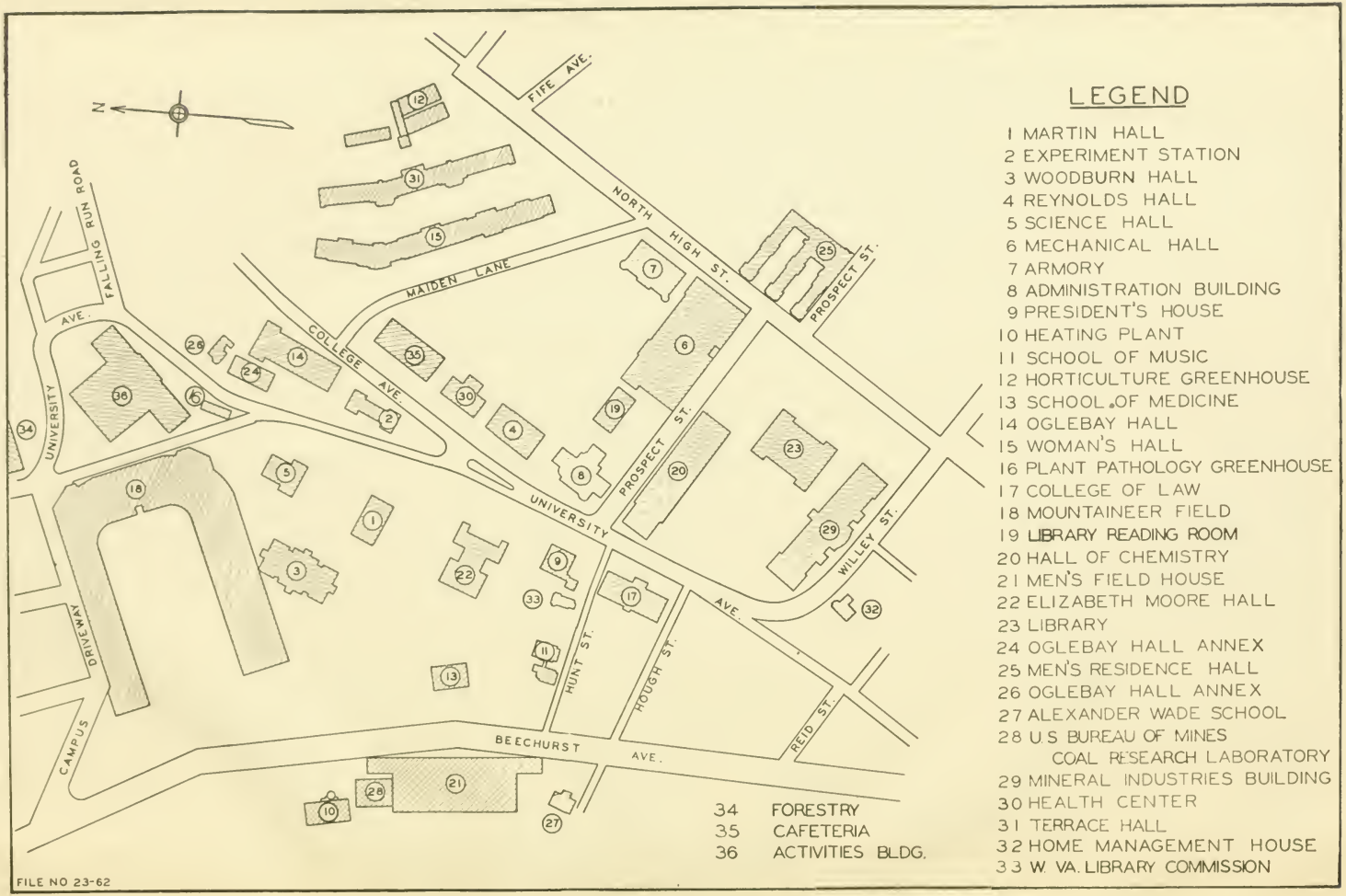
C. T. NEFF, JR.

WEST VIRGINIA UNIVERSITY BULLETIN

THE CATALOGUE NUMBER
The 1947-48 Session

ANNOUNCEMENTS OF THE 1948-49 SESSION

April 1948
MORGANTOWN, WEST VIRGINIA
Published by the University



LEGEND

1 MARTIN HALL
2 EXPERIMENT STATION
3 WOODBURN HALL
4 REYNOLDS HALL
5 SCIENCE HALL
6 MECHANICAL HALL
7 ARMORY
8 ADMINISTRATION BUILDING
9 PRESIDENT'S HOUSE
10 HEATING PLANT
11 SCHOOL OF MUSIC
12 HORTICULTURE GREENHOUSE
13 SCHOOL OF MEDICINE
14 OGLEBAY HALL
15 WOMAN'S HALL
16 PLANT PATHOLOGY GREENHOUSE
17 COLLEGE OF LAW
18 MOUNTAINEER FIELD
19 LIBRARY READING ROOM
20 HALL OF CHEMISTRY
21 MEN'S FIELD HOUSE
22 ELIZABETH MOORE HALL
23 LIBRARY
24 OGLEBAY HALL ANNEX
25 MEN'S RESIDENCE HALL
26 OGLEBAY HALL ANNEX
27 ALEXANDER WADE SCHOOL
28 U.S BUREAU OF MINES
COAL RESEARCH LABORATORY
29 MINERAL INDUSTRIES BUILDING
30 HEALTH CENTER
31 TERRACE HALL
32 HOME MANAGEMENT HOUSE
33 W. VA. LIBRARY COMMISSION

THE CAMPUS OF WEST VIRGINIA UNIVERSITY

CONTENTS

	Page
Calendars	4-5
The Governing Board	6

PART I—THE STAFF OF INSTRUCTION, RESEARCH, AND EXTENSION

The Adminstrative Officers	7
The Staff of Instruction	9
The University Demonstration High-school Staff	22
The Library Staff	24
The University Extension Staff	24
The Agricultural Experiment Station Staff	25
The Agricultural Extension Division Staff	27
The Engineering Experiment Station Staff	28
The Mining and Industrial Extension Staff	29
The Military Staff	29
The Athletic Staff	30
The Athletic Council	30
The Executive Committee of the Senate	30
The Standing Committees	30

PART II—GENERAL INFORMATION

History of the University	33
Location	34
The Physical Plant	35
Funds	36
Government and Organization	36
Living Accommodations	41
Admission to the Undergraduate Colleges and Schools	42
Admission to the Graduate School	47
Veterans of World War II	48
Registration	49
University Fees and Expenses	52
Requirements for Degrees	55
Examinations and Reports	60
Discipline	62
Student Welfare	64
Physical Education and Athletics	67
The University Health Service	69
Employment and Placement Service	71
Gifts, Scholarships, Fellowships, and Loan Funds	72
Prizes, Trophies, and Medals	80
Honor Societies	83
Other University Organizations	85
Publications	87
Associated Institutions	88

PART III—CURRICULAR REQUIREMENTS AND COURSES OF INSTRUCTION IN THE COLLEGES, SCHOOLS, AND DIVISIONS

The College of Agriculture, Forestry, and Home Economics	91
The College of Arts and Sciences	126
The College of Education	202
The College of Engineering and Mechanic Arts and the School of Mines	216
The Graduate School	252
The School of Journalism	257
The College of Law	264
The School of Medicine	269
The Division of Military Science and Tactics	276
The School of Music	277
The College of Pharmacy	286
The School of Physical Education and Athletics	293

PART IV—DEGREES CONFERRED BY THE UNIVERSITY

Degrees Conferred, 1946-47:	
Baccalaureate Degrees	311
Graduate Degrees	326
Degrees Conferred, 1870-1947:	
Baccalaureate Degrees (table)	334
Graduate Degrees (table)	335
Other Degrees (table)	336
The Classified Enrollment (table)	337
The Geographical Distribution of Enrollment (table)	340
Index	341

Year 1948

JANUARY

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The days on which the University is in session are printed in light-face type; Sundays, holidays, and vacations in bold-face type.

The University Calendar

1948

May 29, Saturday---------Alumni Day
May 30, Sunday---------Baccalaureate Exercises
May 31, Monday---------Commencement Day
June 2, Wednesday---------Registration for first term, Summer Session
June 3, Thursday---------First recitations, first term, Summer Session
July 5, Monday (for July 4, Sunday)---------Independence Day, a holiday
July 14, Wednesday---------Close of first term, Summer Session
July 15, Thursday---------Registration for second term, Summer Session
July 16, Friday---------First recitations, second term, Summer Session
August 25, Wednesday---------Close of Summer Session
September 9, Thursday, to September 13, Monday----Freshman Week Program
September 11, Saturday---------Registration of Freshmen
September 13 and 14, Monday and Tuesday----Registration for first semester
September 15, Wednesday---------First recitations, first semester
October 12, Tuesday---------Meeting of University Senate
November 2, Tuesday---------Election Day, a holiday
November 8, Monday---------Midsemester reports due
November 24, Wednesday, to November 28, Sunday, inclusive
Thanksgiving recess
December 18, Saturday, to January 2, Sunday, inclusive------Christmas recess

1949

January 15, Saturday, to January 22, Saturday, inclusive
Final examinations for first semester
January 25 and 26, Tuesday and Wednesday--Registration for second semester
January 27, Thursday---------First recitations, second semester
February 8, Tuesday---------Meeting of University Senate
March 21, Monday---------Midsemester reports due
April 14, Thursday, to April 20, Wednesday, inclusive----------Easter recess
May 10, Tuesday---------Meeting of University Senate
May 20, Friday, to May 27, Friday----Final examinations for second semester
May 28, Saturday---------Alumni Day
May 29, Sunday---------Baccalaureate Exercises
May 30, Monday---------Commencement Day

West Virginia University

Morgantown

Established February 7, 1867

The Board of Governors*

	TERM EXPIRES
A. C. SPURR, PRESIDENT, *Fairmont*	1952
THOMAS L. HARRIS, VICE-PRESIDENT, *Parkersburg*	1951
CHARLES P. MEAD, *Wheeling*	1948
MRS. GEORGE D. HILL, *Camden-on-Gauley*	1949
E. G. OTEY, *Bluefield*	1950
K. DOUGLAS BOWERS, *Beckley*	1953
CHARLES E. HODGES, *Charleston*	1954
WILLIAM G. THOMPSON, *Montgomery*	1955
RAYMOND E. SALVATI, *Huntington*	1956

CHARLES T. NEFF, JR., EXECUTIVE SECRETARY, *Morgantown*

The Board of Governors has charge of the educational, administrative, financial, and business affairs of the University and of Potomac State School of West Virginia University.

*As of July 1, 1948.

PRESS OF
MORGANTOWN PRINTING AND BINDING COMPANY
MORGANTOWN, WEST VIRGINIA

Part I

The Staff of Instruction, Research, and Extension*

THE ADMINISTRATIVE OFFICERS

General

IRVIN STEWART, LL.B., PH.D., LL.D., *President of the University* (1946).

CHARLES THOMPSON NEFF, JR., A.B., *Vice-president of the University and Comptroller* (1946), 1921.

EDNA ARNOLD, M.A., *Dean of Women* (1939), 1910.

RICHARD ASPINALL, D.B., PH.D., *Director of Student Affairs and Director of University Extension* (1945), 1936, 1930.

ELMER M. GRIEDER, M.A., B.S. in L.S., *Librarian* (1947).

J. EVERETT LONG, M.A., *Registrar* (1945), 1929.

The Colleges, Schools, and Divisions

FRANK CUTHBERT, MUS.D., *Director of the School of Music* (1934).

ROLAND PARKER DAVIS, PH.D., *Acting Dean of Engineering* (1945), 1911.

ROBERT BARCLAY DUSTMAN, PH.D., *Chairman of the Graduate Council* (1947), 1924.

THOMAS PORTER HARDMAN, J.D., *Dean of the College of Law* (1931), 1913.

JOSEPH LESTER HAYMAN, PH.C., M.S., *Dean of the College of Pharmacy* (1936), 1919.

CHARLES T. HOLLAND, B.S.E.M., M.S., *Assistant Director of the School of Mines and of Mining and Industrial Extension* (1938), 1917.

JOHN OLIVER KNAPP, B.S.AGR., *Director of the Agricultural Extension Division* (1938), 1917.

WALTER ALLOS KOEHLER, PH.D., *Acting Director of the Engineering Experiment Station* (1947), 1924.

EDWARD PAGE LUKERT, *Colonel, Infantry, U. S. Army, Commandant of Cadets* (1945).

CLAYTON ROBERTS ORTON, PH.D., SC.D., *Dean of the College of Agriculture, Forestry, and Home Economics and Director of the Agricultural Experiment Station* (1938), 1929.

PERLEY ISAAC REED, PH.D., *Director of the School of Journalism* (1939), 1920.

G. OTT ROMNEY, M.A., *Dean of the School of Physical Education and Athletics* (1946).

WILSON PORTER SHORTRIDGE, PH.D., *Dean of the College of Arts and Sciences* (1929), 1922.

JOHN NATHAN SIMPSON,[1] A.B., M.D., *Dean Emeritus, School of Medicine* (1935), 1902.

FORREST WILBUR STEMPLE, PH.D., *Acting Dean of the College of Education* (1945), 1916.

*NOTE: Date of appointment to present position is given in parentheses after title; date following, if any, indicates year of first appointment to a University staff position.

[1]Deceased November 23, 1947.

EDWARD JERALD VAN LIERE, M.D., PH.D., *Dean of the School of Medicine* (1937), 1921.

The Council of Administration; The Senate

For a description of the Council of Administration and of the University Senate, see the section on Government and Organization, page 36.

The Graduate Council

ROBERT BARCLAY DUSTMAN, PH.D., *Professor of Agricultural Biochemistry* (*Chairman*).
ARMAND RENE COLLETT, PH.D., *Professor of Chemistry.*
ROBERT CAMERON COLWELL, PH.D., *Professor of Physics.*
ALEXANDER HARDIE FORMAN, PH.D., *Professor of Electrical Engineering.*
FORREST WILBUR STEMPLE, PH.D., *Professor of Education.*
FESTUS PAUL SUMMERS, PH.D., *Professor of History.*
HARRY GROVE WHEAT, PH.D., *Professor of Education.*

Other Administrative Officers

MARY CATHERINE BAYLES, A.B., *Assistant Registrar* (1946), 1929.
LARUE SHANNON COOMBS, B.S.H.E., *Executive Director, Young Women's Christian Association* (1947).
STEPHEN FULLER CROCKER, A.B., A.M., *Chairman of the Humanities Course* (1943), 1937.
JOSEPH CLAY GLUCK, B.A., B.D., *Coordinator of Veterans' Affairs and Assistant Director of Student Affairs* (1948), 1943.
ROY M. HAWLEY, A.B., *Director of Intercollegiate Athletics* (1938), 1935.
WILLIAM H. HENDERSON, A.B., B.D., *Executive Secretary, Young Men's Christian Association* (1947).
LYLE EDDY HEROD, M.S., *Assistant to the Registrar* (1947).
DAVID W. JACOBS, A.B., *Director, Bureau of Information and Alumni Secretary* (1938).
GERALD JENNY, M.S., *University Editor* (1933), 1929; *Director of University Broadcasting* (1938).
LOUISE KEENER, B.A., *Assistant to the Comptroller* (1936), 1929.
ERNIE BEVAN MCCUE, A.B., A.M., *Assistant Director of University Extension* (1947).
BERNARD R. MCGREGOR, B.S.Ed., *Director of the University Band* (1938), 1935.
WARREN FRANCIS MANNING, PH.D., *Foreign Student Adviser* (1947).
ALVIN MARTIN MILLER, B.S.M.E., *Superintendent of Buildings and Grounds* (1945).
JAMES ROBERT NUZUM, B.S., M.S., *Assistant Director, Bureau of Information* (1947).
BERTHA BROWNING PURINTON, A.M., *Assistant Registrar Emeritus* (1946), 1919.
CHARLES EMMITT ROBERTS, A.B., *Assistant Alumni Secretary* (1948).
RUTH ELEANOR ROBINSON, A.M., *Manager, University Book Store* (1944), 1939.
HUGH A. RUNDELL, B.A., M.A., *Assistant in Radio* (1947).
WILLIAM D. SCOTT, M.S., *Director, Student Activities Building* (1948).
HARRY EVERETT STONE, A.M., *Secretary of Student Loans and Placement* (1936), 1922.

The Student Health Service

JOHN JOSEPH LAWLESS, PH.D., M.D., *Director, Student Health Service* (1944), 1935.
MARY DORCAS CLARK, A.B., M.D., *Assistant Physician* (1947).
OLAN TERRY COFFIELD,[1] M.D., *Assistant Physician* (1946).
SAMUEL JOHN MORRIS, M.D., *Physician and Attending Physician, Department of Athletics* (1935), 1912.
CLARK KENDALL SLEETH, A.B., B.S., M.D., *Physician* (1946), 1935.
BETTY EMERSON, R.N., *Nurse* (1944).
PEARL BENVENUTO,[2] R.N., *Nurse* (1945).
MARY ELOISE STENGER, R.N., *Nurse* (1947), 1943.
FABRY L. HAWK, *Technician* (1935), 1933.
ALBERT F. WOJCIK, B.S.PHAR., *Registered Pharmacist* (1945).
LELA VIRGINIA STUMP, *Technician* (1946).

[1]Resigned June 30, 1947.
[2]Resigned February 28, 1947.

The Residence Halls

MAYME ELIZABETH WADDELL, B.S., M.A., *Business Director* (1935), 1930.
BERTHA HAWLEY ALLEN, A.B., *Social Director, Terrace Hall* (1945), 1944.
LENA ARNOLD, M.A., *Social Director, Women's Hall, Center* (1935).
REA BUCKLEY, Diploma in Piano, *Social Director, Women's Hall, North* (1946).
PANSY OLIVE CORNWELL, Normal Diploma, *Assistant to Social Directors, Women's Hall* (1944).
LOUIS D. CORSON, M.A., *Faculty Resident, Men's Residence Hall* (1946).
ANN CULLEY DYE, B.S., *Dietitian, Women's and Terrace Dining Halls* (1937).
EVELYN HALL, B.S., *Assistant Dietitian, Terrace Dining Hall* (1946).
CLARA REED HARDESTY, *Assistant to Social Directors, Terrace Hall* (1945).
MARY LEE RIDDLE HARRISON, B.S., *Assistant Dietitian, Women's Dining Hall* (1947).
KATHLEEN MITCHELL, *Social Director, Women's Hall, South* (1942), 1940.
MARGUERITE MARIE NEARNBERG,[1] B.S., *Assistant Dietitian, Women's Hall* (1945).
GEORGANNA M. ROMINE, A.B., *Assistant Dietitian, Men's Dining Hall* (1946).
MABEL K. SAMUEL, B.S., *Dietitian, Men's Dining Hall* (1946).
HAZEL TOWNSEND, M.A., *Assistant Social Director, Terrace Hall* (1946).
FRANCES LUCILLE TWIGG, B.S., *Assistant Dietitian, Men's Dining Hall* (1945).

[1]Resigned May 31, 1947.

THE STAFF OF INSTRUCTION

Professors

ALBERT SALISBURY ABEL, A.B., J.D., LL.M., *Professsor of Law* (1946), 1940.
HOWARD BUSHNELL ALLEN, PH.D., *Professor of Education* (1932), 1920.
CHARLES HENRY AMBLER, PH.D., *Professor Emeritus of History* (1947), 1917.
WALTER WARDLAW ARMENTROUT, PH.D., *Professor of Agricultural Economics* (1936), 1924.
HORACE ATWOOD, M.S.AGR., *Professor Emeritus of Poultry Husbandry* (1931), 1897.
JOEL AXELSSON, PH.D., *Visiting Professor in Animal Nutrition* (1947).
ROBERT DODGE BALDWIN, PH.D., *Professor of Education* (1933), 1931.

GORDON ALGER BERGY, PH.C., M.S., *Professor of Pharmacy* (1921), 1916.

LOWELL BESLEY,[2] B.S., M.F., *Professor of Forest Management* (1946), 1937.

GEORGE PAUL BOOMSLITER, M.S.C.E., *Professor of Mechanics* (1920).

MAURICE GRAHAM BROOKS, M.S., *Professor of Wildlife Management* (1947), 1935.

CHRISTOPHER GEORGE BROUZAS, PH.D., *Professor of Latin and Greek* (1935), 1926.

JAMES MORTON CALLAHAN, PH.D., *Professor Emeritus of History* (1940), 1902.

LEO CARLIN, A.B., LL.B., *Professor of Law* (1921), 1916.

CARL HENRY CATHER, M.S., *Professor of Mechanics* (1947), 1916.

HAROLD MALCOLM CATHER, B.S.M.E., M.E., M.S.M.E., *Professor of Mechanical Engineering* (1945), 1919.

SIMON B. CHANDLER, A.M., M.D., *Professor of Anatomy* (1935).

OLIVER PERRY CHITWOOD, PH.D., LL.D., *Professor Emeritus of History* (1946), 1907.

FRIEND EBENEZER CLARK, PH.D., *Professor Emeritus of Chemistry* (1947), 1914.

ARMAND RENE COLLETT, PH.D., *Professor of Chemistry* (1939), 1924.

CLYDE LEMUEL COLSON, A.B., LL.B., S.J.D., *Professor of Law* (1945), 1935.

RACHEL HARTSHORN COLWELL, M.A., *Professor Emeritus of Home Economics and Education* (1935), 1910.

ROBERT CAMERON COLWELL, PH.D., *Professor of Physics* (1924), 1918.

EARL LEMLEY CORE, PH.D., *Professor of Botany* (1942), 1928.

STEPHEN FULLER CROCKER, A.M., *Professor of English* (1946), 1931.

FRANK CUTHBERT, MUS.D., *Professor of Music* (1934).

ANDREW JACKSON DADISMAN, PH.D., *Professor of Economics* (1933), 1914.

ARLEIGH LEE DARBY, A.M., LITT.D., *Professor of Romance Languages* (1929), 1910.

EARL CLAUDIUS HAMILTON DAVIES, PH.D., *Professor of Cemistry* (1931), 1920.

HANNIBAL ALBERT DAVIS, PH.D., *Professor of Mathematics* (1947), 1921.

ROLAND PARKER DAVIS, PH.D., *Professor of Structural Engineering* (1911).

EDMUND CHARLES DICKINSON, A.B., J.D., *Professor of Law* (1921).

GIDEON STANHOPE DODDS, B.A., M.A., PH.D., *Professor of Histology and Embryology* (1925), 1918.

ROBERT TUCKER DONLEY, A.B., LL.B., *Professor of Law* (1947), 1942.

WILLIAM SMITH DOWNS, B.S.C.E., C.E., *Professor (part time) of Railway and Highway Engineering* (1935), 1931.

JOHN WILLIAM DRAPER, PH.D., *Professor of English* (1929).

ROBERT BARCLAY DUSTMAN, PH.D., *Professor of Agricultural Biochemistry* (1929), 1924.

JOHN ARNDT EIESLAND, PH.D., *Professor Emeritus of Mathematics* (1938), 1907.

THOMAS EDSON ENNIS, PH.D., *Professor of History* (1946), 1930.

HARVEY D. ERICKSON,[1] PH.D., *Professor of Forest Utilization* (1947), 1937.

ORFA REX FORD, PH.D., *Professor of Physics* (1943), 1925.

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Professor of Electrical Engineering* (1916), 1913.

CARL MAYNARD FRASURE, PH.D., *Professor of Political Science* (1940), 1927.

HARRY MARION FRIDLEY, PH.D., *Professor of Geology* (1943), 1928.

JAMES HERBERT GILL, M.E., *Professor of Machine Construction and Superintendent of Shops (limited service)* (1940), 1920.

LLOYD RAYMOND GRIBBLE, PH.D., *Professor of Zoology* (1947), 1929.

GRACE MARGARET GRIFFIN, A.M., *Professor of Physical Education* (1944), 1923.

JOHN BEHNY GRUMBEIN, M.M.E., *Professor Emeritus of Power Engineering* (1945), 1903.

ARTHUR A. HALL, B.S.M.E., *Professor of Electrical Engineering* (1922), 1916.

THOMAS PORTER HARDMAN, M.A., J.D., *Professor of Law* (1919), 1913.

THOMAS LUTHER HARRIS, PH.D., *Professor Emeritus of Sociology* (1947), 1921.

JOSEPH LESTER HAYMAN, PH.C., M.S., *Professor of Pharmacognosy* (1936), 1919.

HARRY ORAM HENDERSON, PH.D., *Professor of Dairy Husbandry* (1928), 1919.

JAMES H. HENNING, A.B., M.S., PH.D., *Professor of Speech* (1945).

HUBERT HILL, M.S., *Professor of Chemistry* (1928), 1911.

LAWRENCE BENJAMIN HILL, PH.D., *Professor Emeritus of Education* (1947), 1918.

MILFORD L. HOBBS, M.D., *Professor of Pathology* (1947).

WILLARD WELLINGTON HODGE, M.A., *Professor Emeritus of Chemical Engineering* (1945), 1921.

CHARLES T. HOLLAND, B.S.E.M., M.S., *Professor of Mining Engineering* (1947), 1930.

EARL HUDELSON, PH.D., *Professor of Education* (1930), 1920.

GEORGE HYATT, JR., B.S., M.S., *Professor of Dairy Husbandry* (1947), 1941.

CARL ALFRED JACOBSON, PH.D., *Professor Emeritus of Chemistry* (1946), 1909.

DAVID DALE JOHNSON, A.M., LITT.D., *Professor Emeritus of English* (1946), 1902.

EDWIN CHANNING JONES, M.S.E.E., *Professor of Electrical Engineering* (1947), 1926.

WALTER ALLOS KOEHLER, CH.E., PH.D., *Professor of Chemical and Ceramic Engineering* (1929), 1924.

CHARLES LESTER LAZZELL, PH.D., *Professor of Chemistry* (1946), 1922.

JULIAN GILBERT LEACH, PH.D., *Professor of Plant Pathology* (1938).

EDWARD ALEXANDER LIVESAY, D.SC., *Professor of Animal Husbandry* (1919).

ALFRED DELBERT LONGHOUSE, PH.D., *Professor of Agricultural Engineering* (1945), 1938.

EDWARD PAGE LUKERT, *Colonel, Infantry, Professor of Military Science and Tactics* (1945).

PERCIVAL LLOYD MACLACHLAN, A.B., PH.D., *Professor of Biochemistry* (1943), 1936.

DAVID FIELDING MARSH, A.B., M.S., PH.D., *Professor of Pharmacology* (1947), 1944.

RAY STANLEY MARSH, M.A., *Professor of Horticulture* (1936).

FRED A. MOLBY, PH.D., *Professor of Physics* (1921), 1920.

SAMUEL JOHN MORRIS, M.D., *Professor of Physical Education* (1935), 1912.

RUTH DOUGLAS NOER, M.S., *Professor of Home Economics* (1938), 1925.

NORMAN OLAF OLSON, D.V.M., *Professor of Animal Pathology* (1948).

DICKSON WARD PARSONS, PH.D., *Professor of Rural Organization* (1939), 1923.

LEONARD MARION PEAIRS, PH.D., *Professor of Entomology* (1914), 1911.

W. CLEMENT PERCIVAL, PH.D., *Professor of Forestry* (1939), 1934.

GEORGE GORDON POHLMAN, PH.D., *Professor of Agronomy* (1938), 1930.

REBECCA LUELLA POLLOCK, PH.D., *Professor of Education* (1928), 1916.

PERLEY ISAAC REED, PH.D., *Professor of Journalism* (1927), 1920.

ALBERT MOORE REESE, PH.D., *Professor Emeritus of Zoology* (1946), 1907.

CLARENCE NEWTON REYNOLDS, JR., PH.D., *Professor of Mathematics* (1931), 1921.

JOHN HARRISON RIETZ, D.V.M., M.S., *Professor Emeritus of Animal Pathology* (1947), 1927.

G. OTT ROMNEY, M.A., *Professor of Physical Education* (1946).

BURCH HART SCHNEIDER, B.S., M.S., PH.D., *Professor of Animal Husbandry* (1945), 1938.

WILSON PORTER SHORTRIDGE, PH.D., *Professor of History* (1922).

HOWARD PERRY SIMONS, PH.D., *Professor of Chemical Engineering* (1947), 1939.

FRED MANNING SMITH, PH.D., *Professor of English* (1939), 1927.

ROBERT CLIFTON SPANGLER, PH.D., *Professor of Botany* (1926), 1914.

HENRY WITHERS SPEIDEN, M.S.C.E., *Professor of Civil Engineering* (1941), 1931.

CLAUDE CARL SPIKER, PH.D., *Professor of French and Spanish* (1926), 1913.

ROBB SPAULDING SPRAY, PH.D., *Professor Emeritus of Bacteriology and Public Hygiene* (1946), 1921.

ELIZABETH MATTINGLY STALNAKER, PH.D., *Professor of Psychology* (1928), 1925.

MADISON STATHERS, PH.D., *Professor of Romance Languages* (1910), 1906.

FORREST WILBUR STEMPLE, PH.D., *Professor of Education* (1931), 1916.

PERRY DANIEL STRAUSBAUGH, PH.D., *Professor of Botany* (1923).

FESTUS PAUL SUMMERS, A.M., PH.D., *Professor of History* (1946), 1932.

EMIL MCKEE SUNLEY,[1] PH.D., *Professor of Public Welfare* (1938).

LELAND HART TAYLOR, SC.D., *Professor of Zoology* (1939), 1922.

CHARLES DANSER THOMAS, M.S., PH.D., *Professor of Physics* (1947), 1931.

RALPH B. TOWER, B.B.A., M.B.A., PH.D., *Professor of Economics and Business Administration* (1941).

BIRD MARGARET TURNER, PH.D., *Professor Emeritus of Mathematics* (1947), 1923.

EDWARD JERALD VAN LIERE, M.D., PH.D., *Professor of Physiology* (1921).

CHARLES HENRY VEHSE, PH.D., *Professor of Mathematics* (1947), 1929.

ENOCH HOWARD VICKERS, A.M., *Professor Emeritus of Economics and Business Administration* (1938), 1911.

KYLE CHESTER WESTOVER, B.S., M.S., PH.D., *Professor of Horticulture* (1945), 1921.

HARRY GROVE WHEAT, PH.D., *Professor of Education* (1935).

BENNETT SEXTON WHITE, B.S.M.E., *Professor Emeritus of Drawing and Machine Design* (1946), 1919.

CHARLES VINYARD WILSON, M.S., *Professor of Animal Husbandry* (1946), 1919.

JOHN E. WINTER, PH.D., *Professor of Psychology* (1923), 1921.

[1]Resigned August 31, 1947.
[2]Resigned June 30, 1948.

Associate Professors

NELLIE PERREL AMMONS, A.B., A.M., PH.D., *Associate Professor of Botany* (1945), 1920.

BERTIL GOTTFRIED ANDERSON, PH.D., *Associate Professor of Zoology* (1945), 1942.

ROBERT RUSSELL ASHBURN, A.M., *Associate Professor of Spanish* (1944), 1925.

MORTON BACKER, B.B.A., C.P.A., *Associate Professor of Economics and Business Administration* (1947).

WILFRED HARMON BAKER, B.S.C.E., M.S.C.E., *Associate Professor of Civil Engineering* (1945), 1941.

HORACE LESLIE BARNETT, PH.D., *Associate Professor of Mycology* (1945).

CARTER RICHARD BISHOP, M.A., PH.D., *Associate Professor of English* (1945), 1929.

ROBERT HOWELL BLACK, M.S., *Associate Professor of Animal Husbandry* (1947), 1940.

JAMES PAUL BRAWNER, PH.D., *Associate Professor of English* (1945), 1935.

RALPH CLEMENS BRIGGS, B.M., M.M., *Associate Professor of Music* (1946).

SARA ANN BROWN, B.S., M.S., *Associate Professor of Home Economics* (1948), 1946.

JOSEPH LINCOLN CARTLEDGE, PH.D., *Associate Professor of Genetics* (1943), 1936.

LOUIS WATSON CHAPPELL, A.M., *Associate Professor of English* (1928), 1923.

WILLIAM HENRY CHILDS, PH.D., *Associate Professor of Horticulture* (1944), 1931.

GEORGE CLARK, M.A., PH.D., *Associate Professor of Anatomy* (1947).

THOMAS BAIRD CLARK, B.S.A., M.S., *Associate Professor of Poultry Husbandry* (1946).

JAMES HARRIS CLARKE, M.S., *Associate Professor of Agricultural Economics* (1947), 1939.

ARTHUR R. COLMER,[1] PH.D., *Associate Professor of Bacteriology* (1945).

KERMIT A. COOK, PH.D., *Associate Professor of Education* (1947), 1935.

JOHN REGINALD CRESSWELL, PH.D., *Associate Professor of Philosophy* (1941), 1929.

QUIN FISCHER CURTIS, PH.D., *Associate Professor of Psychology* (1943), 1941.

DUDLEY S. DE GROOT, D.Ed., *Associate Professor of Physical Education* (1948).

JASON CLARK EASTON, PH.D., *Associate Professor of History* (1943), 1938.

MARJA STEADMAN FEAR,[2] M.A., *Associate Professor of Speech* (1945), 1920.

LEO FISHMAN, B.A., M.A., PH.D., *Associate Professor of Economics and Business Administration* (1947).

FREDERICK LINCK GEILER, B.S.PHAR., M.S., *Associate Professor of Pharmacy* (1943), 1928.

JOHN A. GIBSON, JR., PH.D., *Associate Professor of Chemistry* (1945), 1926.

GEORGE WALTER GROW, B.S.M.E., M.S., *Associate Professor of Drawing and Machine Design* (1945), 1912.

CHARLES WICKLINE HILL, B.S.AGR., *Associate Professor of Rural Organization* (1946), 1937.

LYDIA IRENE HINKEL, MUS.B., *Associate Professor of Music* (1939), 1921.

TORKEL HOLSOE, M.F., *Associate Professor of Silviculture* (1946), 1938.

FREDERICK JOHN HOLTER, PH.D., *Associate Professor of Physical Education* (1947).

HAROLD MARTENEY HYRE, M.S., *Associate Professor of Poultry Husbandry* (1944), 1931.

BENJAMIN KEEN, PH.D., *Associate Professor of History* (1946).

JOHN JOSEPH LAWLESS, PH.D., M.D., *Associate Professor of Medicine* (1944), 1935.

MARLYN EDWARD LUGAR, A.B., LL.B., *Associate Professor of Law* (1947), 1939.

WARREN FRANCIS MANNING, A.B., A.M., PH.D., *Associate Professor of French* (1945), 1928.

GEORGE G. MARRA, B.S., M.S., *Associate Professor of Forest Utilization* (1947).

WILLIAM SHERMAN MINOR, A.B., D.B., *Associate Professor of Philosophy* (1946).

CHARLES MITRANI, PH.D., *Associate Professor of Romance Languages* (1931), 1921.

NELL NESBITT, A.M., *Associate Professor Emeritus of Home Economics* (1946), 1923.

DAVID W. NORTHUP, A.M., PH.D., *Associate Professor of Physiology* (1938), 1935.

CHARLES EDWIN PATTON, A.M., *Associate Professor of Art* (1941), 1939.

JAMES IRVING REYNOLDS, B.S.M.E., *Associate Professor of Mechanical Engineering* (1947), 1942.

EVAN OWEN ROBERTS, A.B., M.A., PH.D., *Associate Professor of Economics and Business Administration* (1945), 1939.

IRA ERRETT RODGERS, A.B., *Associate Professor of Physical Education* (1945), 1926.

JACOB SAPOSNEKOW, M.A., *Associate Professor of Sociology* (1941), 1924.

CHARLES BORUM SEIBERT, B.S.E.E., M.S., *Associate Professor of Electrical Engineering* (1944), 1934.

PETER DAVID SHILLAND, B.A., M.A., PH.D., *Associate Professor of Economics* (1946).

JOHN MADISON SLACK, B.A., M.S., PH.D., *Associate Professor of Bacteriology and Public Hygiene* (1946).

CLARK KENDALL SLEETH, A.B., B.S., M.D., *Associate Professor of Physical Diagnosis and Medicine* (1946), 1935.

JOSEPH K. STEWART, PH.D., *Associate Professor of Mathematics* (1946), 1930.

ALBERT LEE STURM, A.B., A.M., PH.D., *Associate Professor of Political Science* (1946).

RICHARD HUYETTE SUDDS, B.S., M.S., PH.D., *Associate Professor of Horticulture* (1940).

CARLTON FULTON TAYLOR, PH.D., *Associate Professor of Plant Pathology* (1945), 1938.

GEORGE E. TOBEN, M.S., *Associate Professor of Agricultural Economics* (1946).

PATRICK ANTHONY TORK, M.S., *Associate Professor of Physical Education* (1947), 1943.

EDWARD HENRY TYNER, PH.D., *Associate Professor of Agronomy* (1943), 1938.

COLLINS VEATCH, PH.D., *Associate Professor of Genetics* (1945).

DANA WELLS, M.A., *Associate Professor of Geology* (1945), 1930.

HAROLD A. WILSON, PH.D., *Associate Professor of Bacteriology* (1947).

KENNETH WOOD, MUS.M., *Associate Professor of Violin and Ensemble* (1941), 1928.

HENRY W. WOOLARD, B.S.E.(AERO), *Associate Professor of Aeronautical Engineering* (1947), 1946.

[1]Resigned August 31, 1947.
[2]On leave of absence, 1947-48.

Assistant Professors

RICHARD ATKINS ACKERMAN, B.S., M.S., *Assistant Professor of Dairy Husbandry* (1946), 1928.

ORVAL JAMES ANDERSON, A.M., *Assistant Professor of English* (1947), 1941.

GLADYS ANDREWS, M.S., *Assistant Professor of Physical Education* (1948).

MARINUS P. BARDOLPH, PH.D., *Assistant Professor of Chemistry* (1947).

WILLIAM DERRICK BARNS, M.A., PH.D., *Assistant Professor of History* (1947), 1940.

FORD LEWIS BATTLES,[1] A.B., A.M., *Assistant Professor of English* (1945), 1940.

KENNETH BELL,[1] B.J., M.A., *Assistant Professor of Journalism* (1944).

KERMIT B. BLANEY, B.S.AGR., *Assistant Professor of Military Science and Tactics* (1946).

JAMES KARL BLETNER, B.S., *Assistant Professor of Poultry Husbandry* (1946), 1935.

SAMUEL BOYD, JR., B.D.A., *Assistant Professor of Speech* (1946), 1943.

CLIFFORD W. BROWN, B.S., M.A., *Assistant Professor of Music* (1947), 1942.

J. NED BRYAN, JR., M.A., *Assistant Professor of Physics* (1946), 1936.

JACK BURNS BYERS,[5] B.S.F., *Assistant Professor of Forest Utilization* (1946), 1941.

JOHN D. CARTER, PH.D., *Assistant Professor of History* (1947).

GENEVIEVE BERNICE CLULO, A.M., *Assistant Professor of Plant Pathology* (1943), 1932.

Martin Theodore Cobin, B.F.A., M.A., *Assistant Professor of Speech* (1947).

Margaret Buchanan Cole, A.B., Ph.D., *Assistant Professor of Mathematics* (1942), 1938.

George Henry Colebank, M.A., *Assistant Professor of Education* (1928).

Ralph William Conard, A.B., *Assistant Professor of Physics* (1946).

Allen Byron Cunningham, Ph.D., *Assistant Professor of Mathematics* (1946), 1935.

Robert Huntley Darby, A.B., A.M., *Assistant Professor of English* (1947), 1939.

Montelle Dietrich, M.S., *Assistant Professor of Home Economics* (1941), 1929.

R. Franklin Dugan, M.F., *Assistant Professor of Wildlife Management* (1943), 1942.

Arthur Pingree Dye, B.S., M.S.Agr., *Assistant Professor of Horticulture* (1941), 1923.

Roy E. Emerson, B.S., M.S., *Assistant Professor of Agricultural Engineering* (1946), 1940.

Clyde Neville English, B.A., M.S.M., *Assistant Professor of Music* (1945).

Margaret Erlanger, M.A., M.S., *Assistant Professor of Physical Education* (1946), 1937.

James W. Evans, Jr., *Assistant Professor of Military Science and Tactics* (1947).

Harold V. Fairbanks, M.S., *Assistant Professor of Chemical Engineering* (1947).

Ruel E. Foster, A.B., M.A., Ph.D., *Assistant Professor of English* (1946), 1942.

Thompson R. Fulton, M.A., *Assistant Professor of Social Work* (1946).

Patrick Ward Gainer, Ph.D., *Assistant Professor of English* (1946).

Claude Elbert Goodwin, A.B., LL.B., *Assistant Professor of Law* (1947).

James L. Hall, Ph.D., *Assistant Professor of Chemistry* (1946).

Steven Harrick, M.A., *Assistant Professor of Physical Education* (1947).

George W. Hawkins, *Assistant Professor of Military Science and Tactics* (1946).

Lydia Irene Hinkel, Mus.B., *Assistant Professor of Education* (1939), 1921.

Margaret E. Hoffman,[7] A.B., M.A., *Assistant Professor of Public Welfare* (1944), 1943.

John Heywood Holden,[2] B.S.Ch.E., M.S.Ch.E., *Assistant Professor of Chemical Engineering* (1945).

Helen Rose Holland, A.B., B.M., Mus.M., *Assistant Professor of Music* (1945), 1940.

Beatrice Hurst, M.A., *Assistant Professor of Physical Education* (1935), 1928.

Florence Hurst, B.S., M.S., *Assistant Professor of Nutrition* (1947).

William L. Husk, B.S.Met.E., *Assistant Professor of Mining Engineering* (1948).

Don Charles Iffland, Ph.D., *Assistant Professor of Chemistry* (1947).

Paul R. Jones, M.S. in Ceramics, *Assistant Professor of Chemical Engineering* (1947), 1946.

Harold Neely Kerr, A.B., M.Litt., *Assistant Professor of Sociology* (1947), 1946.

Joseph L. Knapp, B.S., M.D., *Assistant Professor of Psychiatry* (1947).

Joseph W. Kohnstamm, *Assistant Professor of Military Science and Tactics* (1947).

Victor Jacob Lemke, A.B., A.M., Ph.D., *Assistant Professor of German* (1941), 1939.

John Charles Ludlum, Ph.D., *Assistant Professor of Geology* (1946).

Arthur Cook McBride,[3] Docteur d' Universite (Bordeaux), *Assistant Professor of French* (1941), 1926.

BERNARD R. MCGREGOR, B.S.Ed., *Assistant Professor of Music* (1946).

ABRAHAM STANLEY MARGOLIN, PH.D., *Assistant Professor of Biology* (1947), 1934.

TOM L. MARSHALL, B.S.AGR., *Assistant Professor of Military Science and Tactics* (1946).

GEORGE RALPH MAXWELL, B.S., M.D., *Assistant Professor (part time) of Physical Diagnosis* (1936), 1924.

KENNETH HOLDEN MURPHY,[6] A.B., M.S., *Assistant Professor of Mathematics* (1947), 1939.

OLIVER MEADER NEAL, B.S., *Assistant Professor of Horticulture* (1947), 1942.

GEORGE NORRIE, JR., *Assistant Professor of Military Science and Tactics* (1946).

MARY NADINE PAGE, M.A., *Assistant Professor of English* (1946), 1925.

BETH MAE PALMER, M.S., *Assistant Professor of Home Economics* (1927).

JEANNE PARIS, M.A., *Assistant Professor of Home Economics* (1946), 1945.

ILAND DEE PETERS, M.S., *Assistant Professor of Mathematics* (1947), 1941.

HELEN PURINTON PETTIGREW, PH.D., *Assistant Professor of English* (1941), 1919.

WARD F. PORTER, JR., A.B., *Assistant Professor of Agricultural Economics* (1947).

BLANCHE E. PRICE, M.A., *Assistant Professor of Home Economics* (1945).

CECIL BENJAMIN PRIDE, A.B., M.D., *Assistant Professor (part time) of Surgery* (1936), 1926.

ALSTON LEE REED, B.S.E.E., *Assistant Professor of Electrical Engineering* (1946).

ELIZABETH FROST REED, A.M., *Assistant Professor of English* (1945), 1919.

FLORENCE K. REESE, A.B., M.A., B.S. LIBR. SERV., *Assistant Professor of Library Science* (1946), 1935.

DONALD DIRK RITCHIE, M.A., *Assistant Professor of Botany* (1946), 1938.

WILLIAM ROSS, M.S., *Assistant Professor of Political Science* (1948), 1938.

HUGH A. RUNDELL, B.A., M.A., *Assistant Professor of Speech* (1947).

DAVID SALKIN, M.D., *Assistant Professor of Medicine and Surgery* (1943), 1936.

GREEK SAYRE, M.A., *Assistant Professor of English* (1941), 1918.

FRANK WILLARD SCHALLER, B.S., M.S., *Assistant Professor of Agronomy* (1946), 1937.

JOHN GUSTAV SCHERLACHER, M.ED., *Assistant Professor of Physical Education* (1947).

JOHN SEMON, B.S.P.E., M.S., *Assistant Professor of Physical Education* (1947), 1943.

ARMAND EDWARDS SINGER, A.B., A.M., PH.D., *Assistant Professor of Romance Languages* (1947), 1940.

ARTHUR NEWELL SMITH, A.B., *Assistant Professor of Physical Education* (1931), 1923.

SARA R. SMITH, PH.D., *Assistant Professor of History* (1947), 1946.

VIVIAN SORELLE, A.B., M.A., *Assistant Professor of Journalism* (1944), 1943.

JOHN CLIFFORD STICKNEY, B.S., M.S., PH.D., *Assistant Professor of Physiology* (1945), 1940.

RUSSELL ELLWOOD STRAUB, M.D., *Assistant Professor of Pathology* (1947).

LYDIA ROESCH STROTHER, PH.D., *Assistant Professor of German* (1935), 1925.

ANDREW TIMNICK, PH.D., *Assistant Professor of Chemistry* (1947).

EARL HAVEN TRYON, B.S., M.S., PH.D., *Assistant Professor of Silviculture* (1945).

WILBUR JONES TYLER, B.S., M.S., PH.D., *Assistant Professor of Dairy Husbandry* (1947), 1945.

MARVIN LEWIS VEST, M.S., *Assistant Professor of Mathematics* (1943), 1931.

FRANKLIN GEORGE WADE,[1] A.B., B.S., M.D., *Assistant Professor of Pathology* (1946).

SAMUEL JOSEPHUS WEESE, B.S., M.A., *Assistant Professor of Dairy Husbandry* (1945).

LLOYD W. WELDEN, SR., B.A., M.A., *Assistant Professor of Speech* (1947).

EDWIN J. WHITE, JR., *Assistant Professor of Military Science and Tactics* (1946).

FREDERICK RENDELL WHITTLESEY, M.D., *Assistant Professor (part time) of Medicine* (1940), 1930.

THOMAS WALLEY WILLIAMS, B.S., M.S., PH.D., *Assistant Professor of Anatomy and Histology* (1944).

DOUGLAS B. WILLIAMSON, B.A., M.A., *Assistant Professor of Physics* (1946).

EVERETT WILSON, B.S., M.S.W., *Assistant Professor of Social Work* (1947).

DONALD THOMPSON WORRELL, B.S.E.E., M.S.E.E., *Assistant Professor of Mechanics* (1946), 1941.

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[1]Resigned September 1, 1947.
[2]Resigned September 15, 1947.
[3]On leave, September 1, 1947, to February 25, 1948.
[4]On leave, January 16, 1948, to May 31, 1948.
[5]On leave, October 16, 1947, to January 31, 1948.
[6]On leave, January 16 to May 31, 1948.
[7]Resigned May 31, 1948.

Instructors

LILLIAN ALLEN, M.A., *Instructor in English* (1947), 1946.

EVELYN ANDERSON, M.A., *Instructor in Speech* (1947).

K. STUART ARMSTRONG,[1] M.A., *Instructor in English* (1946).

JO MATHER AULL, *Instructor (part time) in Art* (1945).

WALTER WESLEY BAKER, M.S.CH.E., *Instructor in Chemical Engineering* (1947), 1946.

LEONARD BARNUM, B.S., *Instructor in Physical Education* (1947).

MARCELLUS H. BARR, *Flight Instructor* (1946).

EDWARD P. BARTKUS, B.S., B.S.CH.E., M.S.CH.E., *Instructor in Chemical Engineering* (1947), 1945.

THOMAS BAUSERMAN, M.A., *Instructor in Mathematics* (1947).

LLOYD EDWARD BEVINS, A.B., M.A., *Instructor in English* (1946).

BOND LOSE BIBLE, B.S., M.S., *Instructor in Education* (1947).

GERTRUDE CLARK BLACKWOOD,[1] B.S., *Instructor in Psychology* (1947), 1945.

EDYTHE BLUMERT, B.S., M.A., *Instructor in English* (1946).

SALLIE SHREWSBURY BOARD, A.B., A.M., *Instructor in English* (1945).

ELLA LOUISE BOGGESS, M.A., *Instructor in Education* (1937), 1933.

DONOVAN HINER BOND, B.S.J., *Instructor in Journalism* (1946).

THOMAS J. BRENNAN, B.S.ED., *Instructor in Education* (1947), 1941.

ANNA BROCHICK, M.A., *Instructor in Education* (1938).

TERESA BRODERICK,[1] A.M., *Instructor in English* (1946).

JERRY CAMERON BURCHINAL, B.S.C.E., *Instructor in Civil Engineering* (1946).

WILLIAM JOHN CARL, *Instructor in Foundry Practice and Pipe Fitting (limited service)* (1943), 1920.

C. MURPHY COMBS, M.S., *Instructor in Anatomy* (1948).

BLANCHE MCQUISTON COOVER, A.B., *Instructor in Physics* (1946), 1943.

LUCY MAY COPLIN, A.M., *Instructor in Education* (1931), 1925.

WALTER LEE COPLIN, MUS.B., M.MUS., *Instructor in Music* (1947).

WENDELL H. CORNETET, JR., B.S.E.E., *Instructor in Electical Engineering* (1948).

HAZEL RUTH COUTTS, M.A., *Instructor in Business Administration* (1943).
DOROTHY BAKER COX, A.B., *Instructor in Art* (1948).
DANIEL PAUL CROTTA, B.E., *Instructor in Mechanical Engineering* (1947).
STUART R. DANIELS, B.S.C.E., *Instructor in Civil Engineering* (1947).
TYREECA DAVIS, A.M., *Instructor in Mathematics* (1946).
ARTHUR PAUL DAVISSON,[2] B.S., A.B., M.S., *Instructor in Biology* (1946).
ORETA HOLBERT DAWSON, A.M., *Instructor in English* (1947), 1946.
QUINTO DE PROSPERO,[7] B.M.E., *Instructor in Mechanical Engineering* (1947).
WINTHROP CECIL DIFFORD, M.S., *Instructor in Geology* (1947), 1946.
DAVID WILLIAM DOWDELL, A.B., A.M., *Instructor in English* (1947), 1946.
JOHN DIXON DOWNES, JR., B.S.AGR., *Instructor in Horticulture* (1943).
EVERETTE CHARLES DUBBE, B.S.E.E., *Instructor in Electrical Engineering* (1947).
JOHN MCWHORTER EDMISTON,[2] M.D., *Instructor in Pathology* (1947).
DONALD W. EICHER, A.B., M.S., *Instructor in Education and Physical Education* (1946), 1942.
STANLEY FARR, B.S., *Instructor in Physics* (1947).
GEORGE ANDREW FEDERER, JR., M.A., *Instructor in Education* (1934), 1928.
JAMES ERNEST FIKE, B.S., *Instructor in Dairy Manufacturing* (1947).
HOMER FIZER, B.S.P.E., M.S., *Instructor in Education* (1947), 1940.
HAROLD FULL, A.B., A.M., *Instructor in English* (1947).
ISABELLE T. GADZIKOWSKY, M.D., *Instructor in Medicine* (*Hopemont*) (1946).
ALFRED F. GALLI, M.S.CH.E., *Instructor in Chemical Engineering* (1947).
ROBERT S. GRUMBACH, B.S.E.E., *Instructor* (*part-time*) *in Electrical Engineering* (1947).
ALBERT C. GWYNNE, A.B., *Instructor in Physical Education* (1947), 1934.
MARGARET G. HARTSON,[3] A.B., M.S., *Instructor in Home Economics* (1946).
RUTH WHEELER HATFIELD, A.B., A.M., *Instructor in English* (1944).
BETTY KRAMER HEETER, B.M., *Instructor in Music* (1947).
ELIZABETH HENNING, A.B., *Instructor in Speech* (1946).
GEORGE S. HENRY, *Flight Instructor* (1944).
CHARLES WARREN HEROD, A.B., *Instructor in Machine Shop* (1947).
FRANK HERRERA Y SANCHEZ, A.M., *Instructor in Romance Languages* (1946).
JAMES BLAKE HICKMAN, B.S.CHEM., M.S., *Instructor in Chemistry* (1946), 1941.
MERLE L. HOOVER, B.S.M.E., *Instructor in Mechanical Engineering* (1948).
THOMAS WILLIAM HOWARD, B.S.E.M., *Instructor in Mining Engineering* (1946).
IRVIN EDWARD HOWELL, A.B., *Instructor in Physical Education* (1947).
CARL E. JOHNSON, M.D., *Instructor* (*part time*) *in Medicine* (1941).
HELEN STERRETT JONES, B.S., *Instructor in Home Economics* (1947).
LLOYD EVERETT JONES, *Instructor in Mechanical Engineering* (1946), 1937.
LOYAL H. JONES, B.A., M.S., *Instructor in Biology* (1946).
WILLIAM FRANKLIN KERN,[4] A.B., *Instructor in Physical Education* (1943).
JEAN SMALL KING,[6] M.F.A., *Instructor in Art* (1947).
NICHOLAS KOBZAREFF, B.S., S.T.D., *Instructor in Slavonic Languages* (1944).
RICHARD WILLOUGHBY LAIRD, B.S.E.M., *Instructor in Mining Engineering* (1947).
JEAN BAUMAN LAMBERT, B.S., *Instructor in Speech* (1946).
MARIAN LAWRENCE, B.S., *Instructor in Physical Education* (1947).
NELL LEONIAN, B.S.H.E., M.A., *Instructor in English* (1947), 1931.
HELEN M. LESTER, B.S.C.E., *Instructor in Mechanics* (1947).

ERNEST LUDWIG, B.A., M.S., *Instructor in Bacteriology* (1947).
GERTRUDE MCALLISTER, M.S., *Instructor in Home Economics* (1945).
JOHN H. MCCORMICK, B.S.E.E., *Instructor (part-time) in Mechanics* (1947).
MAVIS ANDRE' MANN, A.B., M.A., PH.D., *Acting Instructor in Political Science* (1947).
GLENN FAYETTE MARTIN, *Instructor in Machine Shop and Welding Practice* (1940).
WEBSTER EARL MILLER, M.A., *Instructor in Chemistry* (1946).
WILLIAM E. MOCKLER, M.A., *Instructor in English* (1946).
GEORGE JOSEPH MONSER, B.S.E.E., *Instructor in Electrical Engineering* (1947).
MARY S. MONTGOMERY, M.A., *Instructor in English* (1947).
SUSAN MAXWELL MOORE, A.B., *Instructor Emeritus in Piano and Sight Playing* (1937), 1903.
AUGUSTA MARIE O'DONALD MORGAN, A.B., M.A., *Instructor in English* (1946).
JAMES SIDNEY MURPHY,[1] B.S.AE.E., *Instructor in Mechanical Engineering* (1946).
CLIFFORD A. MYERS, B.S.F., M.F., *Instructor in Forest Management* (1947).
THEODORE GUY OLSEN, B.S.M.E., *Instructor in Mechanical Engineering* (1947).
RUTH MAXWELL PALMER,[3] B.S.H.E., M.S., *Instructor in Home Economics* (1947), 1945.
LEE PATTON, A.B., *Instructor in Physical Education* (1945).
CHARLES FRANKLIN PEER, B.S.M.E., *Instructor in Mechanical Engineering* (1947).
WARREN DICE POLING, B.S.M.E., *Instructor in Mechanical Engineering* (1947).
PETER POPOVICH, M.S., *Instructor in Chemistry* (1946).
JAMES STANLEY POUNDSTONE, *Instructor in Mining Extension* (1924).
AARON H. RAPKING, JR., M.S., *Instructor in Education* (1947), 1946.
HARVEY N. REXROAD, JR., B.S.E.E., *Instructor in Physics* (1947).
EMMA JANE RHODES, B.M. IN PIANO, M.M., *Instructor in Music* (1946), 1942.
GARNET JAMISON ROGERS,[3] M.A., *Instructor in Education* (1940).
CONSTANCE ROGERSON, B.A., *Instructor (part-time) in Psychology* (1947).
MARCIA SAILE, M.A., *Instructor in Mathematics* (1947).
ERNEST JAMES SANDY,[2] B.S.E.M., *Instructor in Mining Engineering* (1946).
MORTON SANTYMIRE, B.S., *Instructor in Physical Science* (1946).
KATHRYN SAUNDERS, B.A., *Instructor in Psychology* (1947).
CHARLEY SCOTT, B.S., *Instructor in Mechanical Engineering* (1947).
RAYMER EGBERT SEAMAN, *Instructor Emeritus in Woodworking and Foundry Practice* (1945), 1912.
URIEL SEIDEN, B.S.C.E., *Instructor in Civil Engineering* (1947).
MADALENE ESTELLA SMITH,[2] M.A., *Instructor in Education* (1940).
GRACE MARTIN-SNEE, B.M., *Instructor Emeritus in Piano and Pipe Organ* (1945), 1898.
JOSEPH PORTER SOLLARS, B.S., M.A., *Instructor in Economics and Business Administration* (1947), 1946.
SYLVIA JOSEPHINE SOUPART, M.A., *Instructor Emeritus in Education* (1945), 1925
HARRY H. STEPHENS, B.S.C.E., *Instructor (part-time) in Mechanics* (1947), 1943.
EDWARD N. STEVENSEN, JR., B.A.E., *Instructor in Aeronautical Engineering* (1948).
ROBERT S. STILLWELL, B.A., M.A., PH.D., *Instructor in German* (1947).
JUNE METZ THORN,[1] B.S.P.E., *Instructor in Physical Education* (1945).
REBECCA WADE, A.M., *Instructor in Romance Languages* (1945).
MARY JANE WASMUTH, B.M., M.M., *Instructor in Education* (1947), 1943.
BETTY LANIER WATSON, M.A., *Instructor in Chemistry* (1947).

DOROTHY MARIE WATSON, M.A., *Instructor in Education* (1947), 1943.
GEORGE W. WEAVER, B.S.M.E., *Instructor in Mechanics* (1948).
JOHN RAYMOND WEBB, M.S., *Instructor in Agronomy* (1947), 1941.
LOIS REDFORD WELLEN, B.S., M.S., *Instructor (part-time) in Home Economics* (1947), 1946.
RUFUS ASA WEST, *Instructor in Metal-working (limited service)* (1933), 1892.
CHARITY WHITE, A.M., *Instructor in Physical Education* (1946), 1945.
RALPH M. WHITE, A.B., LL.B., *Instructor in Political Science* (1945), 1940.
MAY LANDSTREET WILT, M.A., *Instructor in Education* (1931), 1924.
RICHARD HENRY WILT,[1] A.B., *Instructor in Art* (1946).
ALBERT FREDDIE WOJCIK, B.S.PHAR., *Instructor in Pharmacy* (1945).
MILDRED Y. WOOFTER, A.B., M.A., *Instructor in Education* (1941), 1936.
CHARLES PETER YOST, M.S., *Instructor in Physical Education* (1947), 1946.

[1]Resigned September 1, 1947.
[2]Resigned June 30, 1947.
[3]Resigned July 31, 1947.
[4]Resigned June 30, 1948.
[5]Resigned January 31, 1947.
[6]Resigned January 15, 1948.
[7]Resigned January 31, 1948.

Lecturers

L. E. BIERER, *Lecturer in Journalism* (1947).
JOHN W. DUFF, *Lecturer in Journalism* (1947).
GEORGE R. FARMER, LL.B., *Lecturer in Business Law* (1946).
GUY OTTO FARMER, LL.B., *Lecturer in Law* (1948).
KEITH GERCHOW, M.D., *Lecturer in Social Work* (1946).
GEORGE GRAY, *Lecturer in Journalism* (1947).
DON C. HAYMAN, *Lecturer in Journalism* (1947).
JOHN HELMICK, M.D., *Lecturer in Social Work* (1946).
CARL E. JOHNSON, M.D., *Lecturer in Social Work* (1942).
M. F. KIRSCH, C.P.A., *Lecturer in Accounting* (1946).
OSCAR DOANE LAMBERT, PH.D., *Lecturer in History* (1946), 1945.
C. H. LAYMAN, D.D.S., *Lecturer in Social Work* (1945).
M. TAYLOR MATTHEWS, *Lecturer in Sociology* (1947).
EDMUND M. MORGAN, *Special Lecturer, College of Law* (1947).
JUSTUS PICKETT, M.D., *Lecturer in Social Work* (1945).
ROBERT SCHMIDT, *Lecturer in Journalism* (1947).
JOHN J. S. SEBASTIAN, PH.D., *Visiting Lecturer in Chemical Engineering* (1948).
LOIS SENTMAN, M.A., *Lecturer in Social Work* (1948).
HARRY V. THOMAS, M.D., *Lecturer in Social Work* (1942).
ELDON BRYANT TUCKER, M.D., *Lecturer in Anesthesiology* (1937).

Fellows, Assistants, and Technicians*

JEANNE VIRGINIA ANDERSON, B.MUS., Teaching Fellow in Music (1947).
LIBERTY MARIAN ANTALIS, M.A., *Teaching Fellow in English* (1946).
ARTHUR ARDMAN, A.B., *Teaching Fellow in Physics* (1947).

*For additional names see the sections on "Other Administrative Officers," "Student Health Service," "Agricultural Experiment Station Staff," and "Mining and Industrial Extension Staff."

Mary E. Ashburn, A.B., *Teaching Fellow in English* (1947).
Bette D. Bannister, A.B., *Teaching Fellow in English* (1947).
Sam Barile, A.B., *Teaching Fellow in Physics* (1947).
L. W. Barkley, B.S.Ch.E., *Teaching Fellow in Physics* (1947).
Elizabeth Ann Bartholomew, A.B., *Herbarium Assistant* (1941), 1938.
John W. Breeden, B.S.P.E., *Graduate Assistant in Physical Education* (1947).
Ruben Brissey, B.S., *Teaching Fellow in Chemistry* (1947).
Marjorie Jones Brock, A.B., *Teaching Fellow in Romance Languages* (1947).
Ralph C. Brown, Jr., B.S., *Teaching Fellow in Mathematics* (1948).
Johnson H. Burke, A.B., *Graduate Assistant in Education* (1948).
Mary Catherine Buswell, M.A., *Teaching Fellow in English* (1947).
Margaret Thompson Byrer, A.B., *Teaching Fellow in English* (1947).
Eva Cappellanti, A.B., *Teaching Fellow in Speech* (1947).
John Anthony Caruso, A.B., M.A., *Teaching Fellow in History* (1947).
Louise Livingston Chapman, B.S., *Teaching Fellow in English* (1946).
Pen-Ghing Cheo, B.S., *Graduate Assistant in Plant Pathology* (1947).
Ann Clark, B.S., *Graduate Assistant in Economics and Business Administration* (1947).
Thomas C. Committee, A.B., *Teaching Fellow in Economics and Business Administration* (1947).
George Judd Conrad, B.S., *Teaching Fellow in Geology* (1947).
Mullen O. Coover, M.A., *Teaching Fellow in Biology* (1948).
Willa P. Copenhaver, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
Eugene Corum, B.S.P.E., *Graduate Assistant in Physical Education* (1947).
Eleanor J. Creed, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
Robert A. Crichton, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
Earl H. Crisler, B.S.Ch.E., *Teaching Fellow in Mathematics* (1948).
Eugene Peyton Deatrick, Ph.D., *Mechanician in Chemistry* (1946).
Margaret Deeds, A.B., *Teaching Fellow in English* (1947).
Eleanor Ford, B.S., M.S., *Teaching Fellow in Physics* (1947).
Emile George Frere, B.S., *Teaching Fellow in Romance Languages* (1947).
Emma Jane Freshwater, B.S., *Teaching Fellow in Economics and Business Administration* (1946).
Sydney Davis Garten, B.S., *Assistant in Home Economics* (1947).
Sarah E. Gates, A.B., *Teaching Fellow in English* (1947).
Jean George, B.S.P.E., A.B.Ed., *Graduate Assistant in Physical Education* (1947).
Betty Jo Gilmore, B.S., *Graduate Assistant in Biochemistry* (1947).
Edward C. Grose, B.S.Agr., *Graduate Assistant in Animal Husbandry* (1947).
Michael Hacskaylo, A.B., *Teaching Fellow in Physics* (1947).
Betty Snyder Hall, A.B., *Teaching Fellow in Speech* (1946).
Martha Woofter Hall, B.S., *Teaching Fellow in English* (1946).
William Lloyd Hall, A.B., *Teaching Fellow in Speech* (1947).
Susan C. Harnish, M.A., *Teaching Fellow in English* (1946).
Mary Betty Parker Herrera, A.B., M.A., *Teaching Fellow in Romance Languages* (1946).

DONALD ATWOOD HERRING, B.S.PHAR., *Assistant in Pharmacology* (1948).
HELEN HESS, A.B., *Graduate Assistant in Bacteriology* (1947), 1946.
HOWARD T. HOLCOMB, B.S.ED., *Graduate Assistant in Education* (1948).
B. R. HONECKER, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
DAVID HUNTSBERGER, B.S., *Teaching Fellow in Mathematics* (1947).
MARGARET HYLTON, B.MUS., *Teaching Fellow in Music* (1947).
ERNEST J. JOHNSON, *Technician in Bacteriology* (1947).
JAMES G. JONES, A.B., M.A., *Teaching Fellow in History* (1947).
JAMES KAPNICKY, M.S. CH.E., *Teaching Fellow in Physics* (1947).
MARJORIE KIMMEL, B.S.ED., *Graduate Assistant in Physical Education* (1947).
WILLIAM G. KINCAID, A.B., *Graduate Assistant in Education* (1948).
DAPHNE S. KULAKOWSKI, A.B., *Teaching Fellow in English* (1947).
RUBY LAMBDIN, A.B., B.S., *Teaching Fellow in English* (1947).
LYDIA S. LEMKE, B.A., *Teaching Fellow in German* (1946).
BARBARA LEIGH LEMLEY, A.B., *Teaching Fellow in English* (1946).
ELOISE B. LEONE, A.B., *Teaching Fellow in Speech* (1947).
WILLIAM C.LONG, B. S. CH.E., *Graduate Assistant in Chemical Engineering* (1947).
DONALD MCVEIGH, M.A., *Teaching Fellow in Political Science* (1947).
MICHAEL MAGRO, JR., B.S.ED., *Graduate Assistant in Education* (1948).
BETTY MANTZ, A.B., *Teaching Fellow in English* (1947).
DORIS MEHLINGER, A.B., *Teaching Fellow in English* (1947).
WILLIAM MILLER, M.A., *Graduate Assistant in Plant Pathology* (1947).
CHARLEY R. MOORE, M.A., *Graduate Assistant in Education* (1948).
JOHN A. MOSSBURG, *Mechanician, Civil Engineering* (1947).
ALLEN E. MURPHY, A.B., *Teaching Fellow in Geology* (1947).
MARVIN B. NEWMAN, B.S.M.E., *Teaching Fellow in Mathematics* (1948).
FRANCES NUCCI, A.B., *Teaching Fellow in English* (1947).
JORDAN C. PAPPOS, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
CLYDE PEET, M.S., *Graduate Assistant in Plant Pathology* (1947).
ARTHUR PENNINGTON, B.S., *Teaching Fellow in Mathematics* (1947).
JOHN W. PEW, *Graduate Assistant in Entomology* (1948).
WILLIAM RANDALL, A.B.ED., *Teaching Fellow in Music* (1946).
CHESTER E. RAY, *Technician in Anatomy* (1948).
JANE REGER, A.B., *Museum Curator in Geology* (1946), 1943.
ROBERT ROBERTS, B.S., *Teaching Fellow in Mathematics* (1947).
WALLACE G. ROHRBAUGH, B.S., *Teaching Fellow in Chemistry* (1947).
ANN DRESSEL RONNING, B.S., *Assistant in Home Economics* (1947).
JOHN L. ROSS, B.S.M.E., *Teaching Fellow in Physics* (1947).
CHARLES MICHAEL RUNNER, *Stationary Engineer and Laboratory Assistant in Mechanical Engineering* (1945), 1919.
JOHN R. SCOTT, B.S. AGR., *Graduate Assistant in Horticulture* (1947).
MARY ASHWORTH SMITH, M.S., *Teaching Fellow in Biology* (1947).
JOHN SOUTHERN, A.B., *Teaching Fellow in Enlish* (1947).
BERNECE SPANGLER, M.A., *Teaching Fellow in English* (1947).
BLANCHE STONESTREET, M.A., *Teaching Fellow in Mathematics* (1947).
KENNETH A. TABLER, B.S.AGR., *Graduate Assistant in Dairy Husbandry* (1947).

JANE STEWART TAYLOR, B.S., *Assistant in Statistics* (1947), 1946.
MARY GIBSON TINGLEY, A.B., *Graduate Assistant in Plant Pathology and in Bacteriology* (*Medicine*) (1947), 1946.
ODIS WESLEY TURNER, *Mechanician in Physics* (1947).
CHARLES ERNEST WALLS, *Laboratory Assistant and Mechanician in Chemical Engineering* (1945), 1938.
JAMES R. WELSHONCE, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
CHARLES M. WHEELER, B.S., *Teaching Fellow in Chemistry* (1948).
STANLEY WHITE, B.S.. *Teaching Fellow in Chemistry* (1947).
THOMAS WHITE, B.S., *Teaching Fellow in Economics and Business Administration* (1947).
MERLE E. WILLIAMS, A.B., *Teaching Fellow in English* (1947).
CECIL E. WORKMAN, A.B., *Graduate Assistant in Education* (1948).
HUNG-AO YU, M.S., *Teaching Fellow in Chemistry* (1948).

THE UNIVERSITY DEMONSTRATION HIGH SCHOOL STAFF

GEORGE HENRY COLEBANK, M.A., *Principal* (1928).
BOND LOSE BIBLE, B.S., M.S., *Vocational Agriculture* (1947).
ELLA LOUISE BOGGESS, M.A., *Vocational Home Economics* (1937), 1928.
THOMAS JOHN BRENNAN, B.S.Ed., M.A., *Industrial Arts* (1946), 1941.
ANNA BROCHICK, M.A., *English* (1939), 1938.
CLIFFORD W. BROWN, M.A., *Music* (1945).
RUSSELL CLARK BUTLER,[1] M.S., *Vocational Agriculture* (1944).
MARY JANE CARRICO, B.S.H.E., *Home Economics* (1946).
LUCY M. COPLIN, M.A., *Social Studies* (1931), 1925.
CATHERINE MCKELVEY DORSEY, A.B., *Mathematics* (1943).
DONALD WAYNE EICHER, M.S., *Physical Education* (1943).
GEORGE A. FEDERER, JR., M.A., *Science* (1934), 1928.
HOMER FIZER, B.S.P.E., *Physical Education* (1940).
HAROLD FULL, A.B., A.M., *English* (1947).
ELIZABETH GATES, M.A., *Social Studies* (1943).
JEAN MARSHALL HAYHURST, B.S., *Physical Education* (1947).
JOHN PESTUN, B.M., *Music* (1947).
AARON H. RAPKING, JR., M.S., *Science* (1946).
HELEN ELAINE ROBINSON, A.B., *Librarian* (1947).
GARNET JAMISON ROGERS,[2] M.A., *English* (1940).
KATE MEREDITH ROLLER, M.A., *Art* (1927).
MARY ALICE SEMON, M.A., *Junior High School Teacher* (1943), 1938.
BETTY HALL SHAHAN,[4] B.S.Ed., *Library* (1945).
MADALENE ESTELLA SMITH,[3] M.A., *Commerce* (1940).
BERNICE L. SMREK, M.A., *English* (1945).
SYLVIA JOSEPHINE SOUPART, M.A., *English* (*Emeritus*) (1945), 1924.
MARY JANE WASMUTH, B.M., M.M., *Music* (1943).

[1]Resigned August 15, 1947.
[2]Resigned January 31, 1947.
[3]Resigned June 30, 1947.
[4]Resigned September 1, 1947.

DOROTHY MARIE WATSON, M.A., *Commerce* (1943).
MAY L. WILT, M.A., *Mathematics* (1931), 1924.
MILDRED Y. WOOFTER, M.A., *English* (1937), 1936.

The University Laboratory Elementary School Staff

BLENDA L. PROUDFOOT, M.A., *Teacher, Intermediate Grades* (1943). 1939.
NELLIE R. BALIKER, M.A., *Teacher, Primary Grades* (1944).
MARY JANE WASMUTH, B.M., M.M., *Teacher, Music* (1943).

THE UNIVERSITY LIBRARY STAFF

ELMER M. GRIEDER, A.M., B.S. in L.S., *Librarian* (1947).
RUTH BLODGETT, A.B., *Assistant in Circulation Department* (1940). 1932.
JENNIE DELAWDER BOUGHNER, A.B., *Assistant in West Virginia and Extension Department* (1946), 1932.
FORREST F. CARHART, JR.,[3] A.B., A.M. IN L.S., *Assistant Librarian* (1943).
MARYELLA DURIGG, A.B., A.B. IN L.S., *Senior Circulation Librarian* (1946).
KATHERINE C. DWYRE, A.B., B.S. in L.S., *Order Librarian* (1947).
ALMELYNE FLINT,[1] A.B. B.S. in L.S., *Senior Reference Librarian* (1947).
BUDD L. GAMBEE, A.B., A.B.L.S., *Chief, Audio-visual-aids Librarian* (1948).
EVELYN PRATT HITE, A.B., *Cataloguer (limited service)* (1944), 1922.
ELEANOR EDDY KNUTTI, *Head Extension Library (limited service)* (1944), 1922.
OSCAR D. LAMBERT, PH.D., *Archival Consultant* (1946), 1945.
LENORE C. LEDERER, A.B., B.S. IN L.S., *Junior Circulation Librarian* (1947).
ELIZABETH B. LYLE, A.B., B.S. IN L.S., *Senior Catalogue Librarian* (1947).
VIRGINIA MADIGAN, B.S., *Assistant in Reference Department* (1930).
MARGARET A. MONICO, A.B., B.S. in L.S., *Senior Reference Librarian* (1947).
ELOISE FISHER NEWLON, A.M., *Senior Catalogue Librarian* (1945).
BYRD LEA PICKENS, M.A., *Assistant Circulation Librarian (limited service)* (1945), 1930.
HELEN LOAR SHAMBERGER, A.B., *Assistant in Audio-visual Aids Department* (1946).
MARY VIRGINIA SWISHER,[2] A.B., B.S. in L.S., *Assistant Reference Librarian* (1940).
ELIZABETH TARVER, A.B., B.S. IN L.S., *Chief Technical Processes Librarian* (1946).
MARY ELIZABETH WATTLES, A.B., B.S. in L.S., *Chief Reference Librarian* (1947), 1946.

CLYDE WILLIAM WELLEN, JR., A.B., *Librarian, Colelge of Law* (1948).

THE UNIVERSITY EXTENSION STAFF

RICHARD ASPINALL, D.B., PH.D., *Director of University Extension* (1945), 1936, 1930.
ERNIE B. MCCUE, M.A., *Assistant Director of University Extension* (1947).
W. HUGHES BARNES, M.A., *Conservation* (1946).
ELIZABETH J. GOODALL, M.A., *History* (1945).
BURRITT C. HARRINGTON, ED.D., *Education* (1947).
MINNIE JANE MERRELLS, M.A., *Education* (1946).
HARRY F. TOOTHMAN, PH.D., *Education* (1946).
JAMES W. WRIGHT, A.M., *Sociology* (1947).

[1]Resigned January 7, 1948
[2]Resigned September 24, 1947.
[3]Resigned June 30, 1948.

Campus Staff Members Who Teach One Class in University Extension

ORVAL JAMES ANDERSON, A.M., *English* (1947), 1941.
KERMIT A. COOK, PH.D., *Education* (1941), 1935.
THOMAS E. ENNIS, PH.D., *History* (1940), 1939.
RUEL E. FOSTER, PH.D., *English* (1947), 1942.
CARL M. FRASURE, PH.D., *Political Science* (1939), 1927.
PATRICK WARD GAINER, PH.D., *English* (1947), 1946.
PETER D. SHILLAND, PH.D., *Economics* (1946).
PATRICK A. TORK, M.S., *Physical Education* (1945), 1943.

THE AGRICULTURAL EXPERIMENT STATION STAFF

CLAYTON ROBERTS ORTON, PH.D., SC.D., *Director* (1938), 1929.
RICHARD ATKINS ACKERMAN, M.S., *Assistant Dairy Husbandman* (1946), 1930.
WALTER WARDLAW ARMENTROUT, PH.D., *Agricultural Economist* (1934).
HORACE LESLIE BARNETT, A.B., M.S., PH.D., *Associate Mycologist* (1945).
ANTHONY BERG,[7] M.S., *Associate Plant Pathologist* (1925), 1913.
LOWELL BESLEY,[8] M.F., *Forester* (1946), 1938.
ROBERT HOWELL BLACK, M.S., *Associate Animal Husbandman* (1947), 1940.
JAMES KARL BLETNER, B.S., *Assistant Poultry Husbandman* (1946), 1935.
MAURICE GRAHAM BROOKS, M.S., *Forester* (1947), 1934.
DAVID ROYAL BROWNING,[3] M.A., *Assistant Agronomist* (*P. O. Lakin*) (1947), 1941.
JACK BURNS BYERS,[1] B.S.F., *Assistant Forester* (1946), 1941.
JOSEPH LINCOLN CARTLEDGE, PH.D., *Associate Geneticist* (1943), 1936.
WILLIAM HENRY CHILDS, M.S., PH.D., *Associate Horticulturist* (1944), 1931.
THOMAS BAIRD CLARK, M.S., *Associate Poultry Husbandman* (1943), 1927.
JAMES HARRIS CLARKE, M.S., *Associate Agricultural Economist* (1947), 1939.
GENEVIEVE B. CLULO, A.M., *Assistant Plant Pathologist* (1940), 1932.
ARTHUR R. COLMER,[2] PH.D., *Associate Bacteriologist* (1945).
FERRIS DEWEY CORNELL, JR., PH.D., *Assistant Director* (1945), 1921.
DAVID RAYMOND CREEL, *Photographer* (1947).
CORNELIUS JETT CUNNINGHAM, B.S., *Assistant Animal Husbandman, in Charge of Reymann Memorial Farm* (*P. O. Wardensville*) (1943).
JOHN DIXON DOWNES, JR., B.S.AGR., *Assistant in Horticulture* (1943).
R. FRANKLIN DUGAN, M.F., *Assistant Forester* (1943), 1942.
ROBERT BARCLAY DUSTMAN, PH.D., *Agricultural Biochemist* (1929), 1924.
ARTHUR PINGREE DYE, M.S.AGR., *Assistant Horticulturist* (1941), 1923.
ROY E. EMERSON, B.S., M.S., *Assistant Agricultural Engineer* (1946), 1940.
HARVEY D. ERICKSON,[2] PH.D., *Forester* (1947), 1937.
STANFORD FERTIG,[4] B.S.AGR., *Assistant in Agronomy and Genetics* (1947), 1946.
CLIFFORD AUTEN FLANDERS, M.A., *Assistant Biochemist* (1945).
SIDNEY LONGMAN GALPIN, PH.D., *Hydrologist* (1938), 1927.
EDWIN GOULD,[3] B.S.AGR., *Entomologist, in Charge of University Experiment Farm* (*P. O. Kearneysville*) (1946), 1929.
HARRY ORAM HENDERSON, PH.D., *Dairy Husbandman* (1928), 1919.
TORKEL HOLSOE, M.F., *Associate Forester* (1946), 1938.

GEORGE HYATT, JR., B.S., M.S., *Dairy Husbandman* (1947), 1941.
HAROLD MARTENEY HYRE, M.S., *Associate Poultry Husbandman* (1944), 1931.
GERALD JENNY, M.S., *Agricultural Editor* (1929).
JOHN CHARLES JOHNSTON, *Assistant to the Director* (1943), 1914.
JULIAN GILBERT LEACH, PH.D., *Plant Pathologist* (1938).
VIRGIL GREENE LILLY, PH.D., *Associate Physiologist* (1945), 1927.
EDWARD ALEXANDER LIVESAY, D.SC., *Animal Husbandman* (1919).
ALFRED DELBERT LONGHOUSE, B.S., M.S., PH.D., *Agricultural Engineer* (1945), 1938.
PAUL LYON, *Technical Aid in Biochemistry* (1944).
GERTRUDE MCALLISTER, M.S., *Assistant in Home Economics* (1945).
MARK ANDREW MCHALE,[3] B.S., D.V.M., *Assistant Animal Pathologist* (1945).
THEODORE CLINTON MCILVAINE, PH.D., *Associate Agronomist (Retired)* (1947), 1917.
GEORGE G. MARRA, M.S., *Associate Forester* (1947).
RAY STANLEY MARSH, M.A., *Horticulturist* (1936).
OLIVER MEADER NEAL, JR., B.S., *Assistant Horticulturist* (1947), 1942.
CHARLES THOMPSON NEFF, JR., A.B., *Comptroller* (1934).
NORMAN OLAF OLSON, D.V.M., *Animal Pathologist* (1948).
BOYD J. PATTON,[3] A.B., *Soil Scientist* (1945).
HELEN M. PAVLECH, B.S.ED., *Assistant in Animal Husbandry* (1943).
LEONARD MARION PEAIRS, PH.D., *Entomologist* (1911).
ROGER W. PEASE, B.S., *Assistant Hillculturist* (1947).
W. CLEMENT PERCIVAL, PH.D., *Forester* (1939), 1934.
GEORGE GORDON POHLMAN, PH.D., *Agronomist* (1938), 1930.
WARD F. PORTER, JR., A.B., *Assistant Rural Sociologist* (1947).
JOHN HARRISON RIETZ, D.V.M., M.S., *Animal Pathologist Emeritus* (1947), 1927.
MARY ALICE RYAN,[6] A.B., *Assistant in Plant Pathology* (1944).
FRANK WILLARD SCHALLER, M.S., *Assistant Agronomist* (1946), 1937.
BURCH HART SCHNEIDER, PH.D., *Animal Husbandman* (1945), 1938.
RICHARD HUYETTE SUDDS, PH.D., *Associate Horticulturist* (1940), 1937.
CARLTON FULTON TAYLOR, PH.D., *Associate Plant Pathologist* (1945), 1938.
GEORGE E. TOBEN, M.S., *Associate in Farm Management* (1946).
EARL HAVEN TRYON, B.S., M.S., PH.D., *Assistant Silviculturist* (1945).
WILBUR JONES TYLER, B.S., M.S., PH.D., *Assistant Dairy Husbandman* (1947), 1945.
EDWARD HENRY TYNER, PH.D., *Associate Agronomist* (1943), 1938.
AUDREY HOWARD VANLANDINGHAM, PH.D., *Biochemist* (1946), 1929.
COLLINS VEATCH, PH.D., *Associate Geneticist* (1945).
CHARLES EDWARD WEAKLEY, JR., M.A., *Associate Biochemist* (1938), 1907.
JOHN RAYMOND WEBB, M.S., *Assistant in Agronomy* (1947), 1941.
SAMUEL JOSEPHUS WEESE, B.S., M.A., *Assistant Dairy Husbandman* (1945).
KYLE CHESTER WESTOVER, PH.D., *Horticulturist* (1945), 1921.

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[1]On leave, October 16, 1947, to January 31, 1948.
[2]Resigned August 31, 1947.
[3]In cooperation with the United States Department of Agriculture.
[4]Resigned June 30, 1947.
[5]Resigned September 15, 1947.
[6]Resigned October 31, 1946.
[7]Deceased February 15, 1948.
[8]Resigned June 30, 1948.

MARION WHARTON, M.S., PH.D., *Research Nutritionist* (1946).
CHARLES VINYARD WILSON, M.S., *Animal Husbandman* (1946), 1919.
HAROLD A. WILSON, PH.D., *Associate Bacteriologist* (1947).

THE AGRICULTURAL EXTENSION DIVISION STAFF

JOHN OLIVER KNAPP,[1] B.S.AGR., *Director* (1938), 1917.
CHARLES C. ANDERSON,[1] B.S., M.S., *Administrative Assistant, Program Planning* (1946).
W. HUGHES BARNES, M.A., *Naturalist (P. O. Wheeling)* (1945).
WALDO E. BELL,[1] B.S.ENG., *Extension Agricultural Engineer* (1945).
CHARLES FRANKLIN BISHOP,[1] M.S., *Assistant Extension Plant Pathologist* (1944), 1940.
ROBERT STUART BOAL,[1] B.S., *Extension Economist in Marketing* (1946), 1943.
ANNA MILDRED BOGGS,[1] A.B., *Assistant State Leader, Home Demonstration Work* (1936), 1927.
IRA BROOKS BOGGS,[1] *State Boys' Club Agent* (1933), 1926.
CARROLL BOND,[6] A.B., *Assistant Extension Soil Conservationist (P. O. Jane Lew)* (1942).
KENNETH R. BOORD,[1] *Assistant Extension Editor* (1946), 1943.
LELAND BOOTH, B.S.AGR., *Associate Extension Editor* (1933).
HERMAN MCCLURE BOWERS,[1] B.S.AGR., *District Agent* (1942), 1929.
WILLIAM LEWIS CAMPBELL,[7] B.S., *Extension Field Agent in Dairying* (1946).
ROGER LEE CHAMBLISS, JR.,[3] *Extension Economist in Farm Management* (1946), 1941.
ELOISE SNOWDEN COFER[1], A.B., M.S., *Extension Specialist in Foods and Nutrition* (1942).
BENJAMIN FRANKLIN CREECH,[1] B.S.AGR., *State Supervisor, Emergency Farm Labor; Extension Animal Husbandman* (1946), 1917.
DAVID RAYMOND CREEL, *Assistant Extension Editor* (1947).
CARLTON P. DORSEY,[1] B.S.AGR., *Assistant State Supervisor, Emergency Farm Labor; Associate State Club Leader* (1946), 1927.
R. FRANKLIN DUGAN,[1] M.F., *Extension Specialist in Wildlife Management (P. O. Buckhannon)* (1944), 1942.
RAY JEROME FRIANT,[1] B.S., *Extension Agronomist* (1929), 1922.
RUSSELL HENDERSON GIST,[1] B.S.AGR., *State Agent* (1933), 1924.
THOMAS DAVIS GRAY,[1] B.S.HORT., *Extension Landscape Architect* (1946), 1920.
CHARLES HENRY HARTLEY,[1] B.S.AGR., *State Club Leader* (1933), 1914.
TED ROBERT HASH,[1] B.S., *Extension Poultryman* (1947), 1937.
GERALD HEEBINK,[1] M.S., *Extension Dairy Husbandman* (1935).
FLORENCE HOWARD,[1] *State Girls' Club Agent* (1946), 1935.
GERTRUDE HUMPHREYS,[1] A.B., *State Leader, Home Demonstration Work* (1928), 1918.
CARL J. JOHNSON, B.S.F., *Extension Forester* (1947).
CLAUDE RAY KEMPER, B.S.AGR., *Extension Specialist in Vegetable Gardening* (1948).
RUTH ELIZABETH KNOCH,[1] B.S., M.S., *Extension Clothing Specialist* (1947), 1941.
MELVIN H. KOLBE,[1] B.S.AGR., *Assistant Extension Horticulturist* (1947).
JESSIE FORTNEY LEMLEY,[1] B.S.H.E., *Assistant State Leader, Home Demonstration Work* (1942), 1922.
JANE LYMAN,[4] A.B., *Assistant Extension Editor, Radio (P.O. Wheeling)* (1945).

RAY STANLEY MARSH, M.A., *Horticulturist* (1936).

BYRON WAYNE MOORE,[2] B.S.AGR., *Assistant Extension Poultryman* (1947).

BEN MORGAN,[1] A.B.ED., B.S.AGR., *Associate Extension Animal Husbandman* (1947), 1935.

CHARLES THOMPSON NEFF, JR., A.B., *Comptroller* (1934), 1927.

IRA DEWARD PORTERFIELD,[1] B.S., *Assistant Extension Dairyman* (1946).

HUGH WILLARD PRETTYMAN,[1] B.S.AGR., *Extension Horticulturist in Marketing* (*P. O. Inwood*) (1917).

WILLIAM HAVARD ROBERTS,[1] B.S., *District Agent* (1935).

GEORGE SHARPE,[1] B.S.AGR., M.S., *Extension Soil Conservationist* (1944), 1930.

BERTHA L. SHAW, *Assistant to Director* (1945), 1921.

EDWARD LEE SHAW,[2] B.S.AGR., *Extension Sheep Specialist* (1917).

EVERETT CLIFTON SHERWOOD,[1,3] M.S., *Extension Plant Pathologist* (*P. O. Martinsburg*) (1920).

EUGENE SHOULDERS, B.S.F., *Cooperative Farm Forester* (1948).

IRENE A. SPITZ,[1] A.B., *Extension Recreation Specialist* (1946).

GLAYDS WASMUTH,[5] M.S., *Extension Specialist in Home Management* (1941), 1935.

LEIGHTON GUILFORD WATSON,[1] A.B., *Extension Editor* (1947), 1938.

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[1]In cooperation with the United States Department of Agriculture.
[2]In cooperation with the State Department of Agriculture.
[3]Resigned September 20, 1947.
[4]Resigned August 31, 1947.
[5]Resigned January 5, 1948.
[6]Resigned February 29, 1948.
[7]Resigned March 15, 1948.

THE ENGINEERING EXPERIMENT STATION STAFF

WALTER ALLOS KOEHLER, CH.E., M.S., PH.D., *Acting Director* (1946), 1924.

ROLAND PARKER DAVIS, PH.D., *Structural Engineer* (1947), 1911.

GEORGE PAUL BOOMSLITER, M.S. in C.E., *Engineer, Mechanics* (1947), 1920.

HAROLD MALCOLM CATHER, M.S.M.E., *Mechanical Engineer* (1947), 1916.

ALEXANDER HARDIE FORMAN, M.M.E., PH.D., *Electrical Engineer* (1947), 1913.

CHARLES T. HOLLAND, B.S.E.M., M.S.E.M., *Mining Engineer* (1947), 1930.

HENRY WITHERS SPEIDEN, M.S.C.E., *Civil Engineer* (1947), 1931.

HOWARD PERRY SIMONS, PH.D., *Chemical Engineer, Supervisor International Nickel Company Fellowship on Heat Transfer* (1947), 1939.

JAY EDGAR BILLINGSLEY, B.S.C.E., *Research Engineer, Petroleum and Gas Fellowships* (1945).

JAMES IRVING REYNOLDS, B.S.M.E., *Associate Mechanical Engineer, Supervisor Fuel City Metal Works Fellowship on Air Conditioning* (1947), 1942.

HENRY W. WOOLARD, B.S.E.(AERO), *Associate Aeronautical Engineer* (1948).

ROSCOE ELTON HANNA, JR., B.S., *Research Assistant* (1947), 1944.

HAROLD VINCENT FAIRBANKS, B.S.CH.E., M.S., *Assistant Metallurgical Engineer, Supervisor Armstrong Cork Company Fellowship on Metallurgy* (1947).

DONALD THOMPSON WORRELL, M.S.E.E., *Assistant Engineer, Mechanics* (1947), 1940.

PAUL RUSSELL JONES, B. CER. ENGR., M.S., *Assistant Ceramic Engineer*, 1947.

MELVIN EUGENE HINKLE,[6] B.S.M.E., *Research Associate, Bituminous Coal Research, Inc., Fellowship on Coal Mine Drainage* (1944).

ROBERT LEE ALKIRE,[2] B.S., *Assistant Research Engineer* (1946).

KENNETH O. LILLY, *Research Assistant, Coal Preparations Fellowship* (1945).
KATHRYN HUFFMAN, M.S. (Chemistry), *Chemist (part-time)* (1944).
JAMES GORDON WITHERS, B.S.Ch.E., *Research Fellow, International Nickel Company Fellowship* (1947).
JAMES A. KAPNICKY, B.S.Ch.E., *Research Fellow, Armstrong Cork Company* (1947).
HAYWARD GLEN TAYLOR,[1] B.S.Ch.E., *Research Assistant* (1946).

[1]Resigned July 1, 1947.
[2]Resigned February 29, 1948.

THE MINING AND INDUSTRIAL EXTENSION STAFF

CHARLES T. HOLLAND, B.S.E.M., M.S.E.M., *Assistant Director* (1945), 1930.
LESLIE EMIL BRADLEY, A.B., *Instructor in Mining Extension* (1945).
A. PAGE DICKENS, *Instructor in Mining Extension* (1937).
ROSCOE E. HANNA, JR., B.S., *Instructor in Industrial Extension* (1944).
THOMAS WILLIAM HOWARD, B.S.E.M., *Research Fellow in Mining and Industrial Extension* (1946).
KENNETH O. LILLY, *Research Assistant* (1945).
JOSEPH DWIGHT MCCLUNG, B.S.E.E., *Supervisor and Instructor in Mining Extension* (1947), 1941.
WILLIAM HENRY MACKENZIE, *Instructor in Mining Extension* (1945).
JAMES STANLEY POUNDSTONE, *Instructor in Mining Extension* (1924).
HOWARD MARSHALL RONCAGLIONE, *Instructor in Mining Extension* (1947).
HERMAN DAVID SYDENSTRICKER, A.B., *Instructor in Mining Extension* (1947), 1941.
W. B. TALBOTT, *Instructor in Mining Extension* (1927).
HOBART WATSON, *Instructor in Mining Extension* (1925).
JAMES OLIVER WEEKLY, *Instructor in Mining Extension* (1945).

THE MILITARY STAFF

EDWARD PAGE LUKERT, *Colonel, Infantry* (1945).
RUSSELL B. COOPER, *Major, Signal Corps* (1947).
GEORGE W. HAWKINS, *Major, Corps of Engineers* (1946).
KERMIT B. BLANEY, B.S.Agr., *Captain, Infantry* (1946).
GEORGE D. CHITTUM, JR., *Captain, Corps of Engineers* (1947).
JOSEPH W. KOHNSTAMM, *Captain, Signal Corps* (1947).
TOM L. MARSHALL, B.S.Agr., *Captain, Air Corps* (1946).
GEORGE NORRIE, JR., *Captain, Infantry* (1946).
JAMES W. EVANS, JR., *First Lieutenant, Air Corps* (1947).
EDWIN J. WHITE, JR., *First Lieutenant, Air Corps* (1946).

JAMES F. KAST, *Master Sergeant, Field Artillery* (1944).
JACK C. MIXON, *Master Sergeant, Corps of Engineers* (1946).
JOHN D. PARSONS, *Master Sergeant, Air Corps* (1946).
EUGENE J. RYSHKUS, *Master Sergeant, Signal Corps* (1946).
TONY J. TERRIZZI, *Master Sergeant, Air Corps* (1947).
CHARLES L. BREWSTER, *Technical Sergeant, Glider F. A. AirBorne* (1947).
ROBERT C. CALDWELL, *Technical Sergeant, Air Corps* (1946).
HARRY A. CLARK, *Staff Sergeant, Armored Field Artillery* (1947).
ALFRED H. ORTMANN, *Staff Sergeant, Infantry* (1942).
HORACE W. PARKER, *Technician Third Grade, Ordnance* (1946).

THE ATHLETIC STAFF

ROY M. HAWLEY, A.B., *Director of Intercollegiate Athletics* (1938), 1935.
FORREST B. CRANE, A.B., *Director of Athletic Publicity* (1947), 1942.
DUDLEY S. DEGROOT, D.ED., *Head Football Coach* (1948).
WILLIAM F. KERN,* A.B., *Head Football Coach* (1940).
JAMES HARRIS, A.B., *Assistant Football Coach* (1946).
IRVIN E. HOWELL, A.B., *Assistant Football Coach* (1946).
LEONARD BARNUM, A.B., *Assistant Football Coach* (1947).
JOHN SHONK, A.B., *Assistant Football Coach* (1947).
CHARLES YOST, A.B., *Assistant Football Coach* (1947).
IRA E. RODGERS, A.B., *Assistant Football Coach* (1947), 1920.
LEE PATTON, A.B., *Freshman Football Coach and Head Basketball Coach* (1947), 1945
STEPHEN HARRICK, A.B., *Wrestling and Baseball Coach* (1947), 1924.
ALBERT C. GWYNNE, A.B., *Athletic Trainer* (1947), 1934.
LOWRY M. STOOPS, A.B., *Assistant Director of Athletics* (1926).
CHARLES S. SIMMONS, *Ticket Manager* (1947).
JAMES MCCARTNEY, A.B., *Staff Assistant* (1947).
RUSSELL K. BOLTON, A.B., *Assistant Ticket Manager* (1947), 1945.
SAMUEL JOHN MORRIS, M.D., *Medical Adviser* (1935).
ART SMITH, A.B., *Track Coach* (1931), 1923.
ROBERT TITCHENAL, A.B., *Assistant Coach in Football* (1948).

*Resigned June 30, 1948.

THE ATHLETIC COUNCIL

G. O. ROMNEY (chairman), C. L. COLSON, H. M. FRIDLEY, and J. O. KNAPP, faculty members; G. W. JACKSON and I. L. VANVOORHIS, Alumni members; R. G. GENTRY, student member; and WM. G. THOMPSON, Board of Governors member, *ex officio*.

THE EXECUTIVE COMMITTEE OF THE SENATE

President STEWART (chairman), MESSRS. BALDWIN, BROOKS, COLWELL, DICKINSON, FRASURE, KOEHLER, and LONG (secretary).

THE STANDING COMMITTEES*

The University

COMMITTEE ON STUDENT AFFAIRS (GENERAL): MR. ASPINALL, Director of Student Affairs (chairman), and the chairman of each of the following subcommittees: convocations, discipline, student residences, social affairs, University calendar, student publications, student body, student organizations, and prizes, scholarships, and loans.

CONVOCATION: MESSRS. ASPINALL, GLUCK, JACOBS, MANNING, and WOOD; student members, MARGARET S. CAMERON and HERBERT H. FOCKLER.

DISCIPLINE: MESSRS. STRAUSBAUGH and BESLEY; MRS. PETTIGREW.

STUDENT FEE FUND: MR. ASPINALL and MISS ARNOLD; student members, JEANNETTE BALLENGEE, JAMES W. HAMILTON, and THOMAS S. SMITH, JR.

*The first-named member serves as chairman.

PRIZES, SCHOLARSHIPS, AND LOAN FUNDS: MESSRS. ASPINALL, ARMENTROUT, BRIGGS, HAYMAN, HENNING, and STONE; MISS ARNOLD.

OFF-CAMPUS SCHEDULES: MESSRS. ASPINALL, HAYMAN, and SHORTRIDGE.

SOCIAL AFFAIRS: MESSRS. DARBY, CORNELL, LUKERT, MORRIS, and WELLS; MISSES ARNOLD, GRIFFIN, and PALMER; student members, PATRICIA ANN EDWARDS, CLINE EUGENE BENNETT, FRANK ALBERT DEBIASE, and MARTHA ELVIRA PUGH.

STUDENT BODY: THOMAS S. SMITH, JR., president; VONCEIL M. FARR, vice-president; HERBERT A. REAVES, Senior representative; MARY P. PAUL, Senior representative; WILLIAM B. HAWLEY, JR., Junior representative; DAWN C. KITE, Junior representative; CHARLES S. SCHRADER, Senior Class president; JAMES H. SKIDMORE, Junior Class president; WILLIAM H. STREET, Sophomore Class president; BARBARA HOKE, Freshman Class president.

STUDENT PUBLICATIONS: MESSRS. REED, SPIKER, HAWLEY, JENNY, BRAWNER, PEAIRS, and ABEL; student members, JAMES G. COFFEY and BEN G. RHODES.

STUDENT RESIDENCES: MESSRS. ASPINALL, CORSON, STONE, and SLEETH; MISSES ARNOLD and WADDELL; student members, MARY LOU HART and GEORGE M. BARRICK.

STUDENT ORGANIZATIONS: MESSRS. COOK, WHEAT, HOLTER, and CORE; MISS ALLEN.

SUBCOMMITTEE ON NEW RESIDENCES: MESSRS. ASPINALL, MILLER, and DICKINSON.

FRATERNITY AND SORORITY SCHOLASTIC RECORDS: MESSRS. PEAIRS, LONG, and SEMON; MRS. COLE.

ADMISSIONS: The Registrar and the deans and directors of all colleges and schools admitting freshmen.

BOARD OF GOVERNORS SCHOLARSHIPS: MESSRS. CORNELL, C. H. CATHER, J. L. HALL, LONG, and ROMNEY; MISS ARNOLD.

BUILDINGS AND GROUNDS: MESSRS. MILLER and DYE.

PERMANENT BUILDINGS: MESSRS. LAZZELL, BALDWIN, H. M. CATHER, MARSH, and SUMMERS.

RADIO: MESSRS. BROOKS, JENNY, STURM, SUMMERS, and VEST; MISS SORELLE.

SPACE ALLOCATION: MESSRS. BALDWIN, MILLER, HUBERT HILL, and LONG.

The Senate

COMMITTEES: MESSRS. BRAWNER, CURTIS, FORMAN, LEACH, and ROMNEY.

EXTENSION: MESSRS. ASPINALL, BALDWIN, C. R. BISHOP, FRASURE, HOLLAND, and KNAPP.

INSTRUCTIONAL POLICIES AND PRACTICES: MESSRS. SPIKER, ASHBURN, COLLETT, DODDS, E. C. JONES, PERCIVAL, and WHEAT.

LIBRARY: MESSRS. GRIEDER, ALLEN, BRAWNER, CARTLEDGE, MACLACHLAN, SEIBERT, and SUMMERS; MISS STALNAKER.

MEMBERSHIP: MESSRS. STRAUSBAUGH, BROOKS, and LAWLESS.

PUBLICATIONS: MESSRS. ABEL, BATTLES, H. M. CATHER, JENNY, KEEN, LONG, and REED.

RESEARCH: MESSRS. LEACH, ANDERSON, CROCKER, LAZZELL, SIMONS, STURM, THOMAS, VAN LIERE, and WELLS; MESSRS. ORTON, KOEHLER, DUSTMAN *ex officio*.

STUDENT ELIGIBILITY: MESSRS. CROCKER, ASPINALL, FRIDLEY, HENNING, HYATT, LONG, and WHEAT.

TEACHER TRAINING: MISS NOER; MESSRS. C. R. BISHOP, COLEBANK, CUTHBERT, GIBSON, MCBRIDE, PARSONS, STEMPLE, and TAYLOR; MISS GRIFFIN.

TENURE AND RETIREMENT: MESSRS. DICKINSON, ARMENTROUT, COLWELL, SLEETH, and VEST.

The Colleges

SCHOLARSHIP:

College of Agriculture: MESSRS. BESLEY and POHLMAN; MISS DIETRICH.

College of Arts and Sciences: MESSRS. ASHBURN, CORE, CURTIS, ROBERTS, SMITH, STEWART, and STURM.

College of Education: MESSRS. WHEAT and COOK and MISS POLLOCK.

College of Engineering and Mechanic Arts: MESSRS. HALL, KOEHLER, and C. H. CATHER.

School of Journalism: MESSRS. REED and BOND; MISS SORELLE.

School of Medicine: MESSRS. DODDS, CHANDLER, HOBBS, MACLACHLAN, and SLEETH.

School of Music: MESSRS. CUTHBERT and WOOD and MISS HINKEL.

College of Pharmacy: MESSRS. GEILER, BERGY, and WOJCIK.

School of Physical Education and Athletics: MISS HURST and MESSRS. SEMON and TORK.

NOTE: For all other college committees see the announcements of the respective college or school in Part III of this **Catalogue.**

Fraternity Advisers

Alpha Sigma Phi, MARLYN E. LUGAR; Beta Theta Pi, CHARLES D. THOMAS; Delta Tau Delta, CARL M. FRASURE; Kappa Alpha, C. R. BISHOP; Kappa Sigma, A. J. DADISMAN; Phi Delta Theta, ROBERT COLWELL; Phi Kappa Psi, DAVID W. JACOBS; Phi Kappa Sigma, CHARLES L. LAZZELL; Phi Kappa Tau, DANA WELLS; Phi Sigma Delta, V. J. LEMKE; Phi Sigma Kappa, SAMUEL J. MORRIS; Pi Kappa Alpha, J. L. CARTLEDGE; Pi Lambda Phi, G. P. BOOMSLITER; Sigma Chi, G. OTT ROMNEY; Sigma Nu, RUSSELL H. GIST; Sigma Phi Epsilon, H. G. WHEAT; Tau Kappa Epsilon, F. F. CARHART, JR.

Sorority Supervision

Supervision of all sororities (see page 85) on the campus is vested in the Office of the Dean of Women.

Part II
General Information*

HISTORY

West Virginia University originated from the National Land-Grant (Morrill) Act of July 2, 1862, and the subsequent action of the Legislature in accepting and carrying out the provisions of the Act. On January 9, 1866, the board of trustees of the Monongalia Academy at Morgantown tendered to the Legislature, for use of the contemplated state or land-grant college, all its property, including Woodburn Female Seminary, on condition that the college should be located at Morgantown. On January 30, 1867, the Legislature accepted the property and on February 7 passed an act permanently establishing "The Agricultural College of West Virginia" and authorizing the Governor to appoint 11 suitable persons as a Board of Visitors.

The Visitors held their first meeting on April 3, 1867, at which time they appointed Dr. Alexander Martin president and established collegiate, scientific, and agricultural departments of instruction. Military training was introduced at this time under the provisions of the Morrill Act.

By an act of December 4, 1868, the name of the College was changed to "West Virginia University" and the "Board of Visitors" to the "Board of Regents." On July 1, 1919, the "Board of Regents" was merged in the "State Board of Education." By an act passed April 14, 1927, the control of the University was vested in a "Board of Governors."

Following the establishment of the University, expansion was rapid. The College of Law was added in 1878; the College of Engineering and Mechanic Arts in 1887; the Agricultural Experiment Station in 1888; the College of Agriculture and the School of Music in 1897; and the School of Medicine in 1902.

With the opening of the new century a period of consistent growth was entered upon. A Department of Pharmacy was added to the School of Medicine in 1914; in the same year the Department of Home Economics, until then a unit in the College of Arts and Sciences, was transferred to the College of Agriculture. The Division of Agricultural Extension was organized in 1912, and Liberal Arts extension centers were established as early as 1916.

In 1917 an extensive building program was inaugurated, which has added eight major units to the Campus. The Engineering Experiment Station was organized in 1921 and the School of Mines in 1926. In 1927 the work in Education, hitherto administered as a department of the College of Arts and Sciences, was transferred to the newly-created College of Education. In 1928 the Division of Physical Education was created.

*NOTE: West Virginia University reserves the right, without further notice, to revise the organization, fees, offerings, and requirements herein announced.

Paralleling this development, faculties were methodically strengthened, curricular adjustments steadily undertaken, and foundations laid for social, industrial, and scientific research agencies as bases for still broader fields of service. The movement culminated in the order of the Board of Governors of January, 1930, providing for the establishment of a Graduate School looking beyond the degrees of Master of Arts and Master of Science, which the University had steadily conferred for half a century, to the more advanced curricula leading to the degree of Doctor of Philosophy.

In 1936 the Department of Pharmacy was discontinued as a unit in the School of Medicine and was established as a College of Pharmacy. A year later the Division of Physical Education and the Department of Athletics were combined to form the School of Physical Education and Athletics. The Course in Forestry, begun in 1935 as a two-year course in the College of Agriculture, in 1937 was enlarged to a full four-year course enabling this college to grant the degree of Bachelor of Science in Forestry. The unit then became the College of Agriculture, Forestry, and Home Economics. In 1939 the Department of Journalism was discontinued as a unit in the College of Arts and Sciences and was made the School of Journalism. In the same year a Department of Art was established in the College of Arts and Sciences. The Department of Social Work was authorized in 1943 to offer undergraduate work leading to the degree of Bachelor of Science (Social Work) and on the graduate level a one-year Social Work curriculum leading to a Professional Certificate of Social Work. A new four-year course offered by the College of Arts and Sciences and the School of Medicine leading to the degree of Bachelor of Science (Medical Technology) was approved in 1944.

The University has had 12 regular presidents: Alexander Martin, 1867-1875; John W. Scott (acting), 1875-1877; John Rhey Thompson, 1877-1881; Daniel Boardman Purinton (acting), 1881-1882; William L. Wilson, 1882-1883; Robert C. Berkeley (Chairman of the Faculty), 1883-1885; Eli Marsh Turner, 1885-1893; Powell Benton Reynolds (acting), 1893-1895; James L. Goodnight, 1895-1897; Jerome Hall Raymond, 1897-1901; Daniel Boardman Purinton, 1901-1911; Thomas Edward Hodges, 1911-1914; Frank Butler Trotter (acting), 1914-1916; 1916-1928; John Roscoe Turner, 1928-1935; Robert Allen Armstrong (acting), 1935; Chauncey Samuel Boucher, 1935-1938; Charles Elmer Lawall (acting), 1938-1939; 1939-1945; Charles Thompson Neff, Jr., (acting), 1945-1946; Irvin Stewart, 1946-.

LOCATION

West Virginia University is located in Morgantown, the county seat of Monongalia, south of the Mason-Dixon line where it forms the boundary line between southwestern Pennsylvania and northern West Virginia.

Morgantown is 11 hours by rail from New York City, 12 hours from Chicago, and three hours from Pittsburgh. It may be reached from the east and west through Grafton, West Virginia; Connellsville, Pennsylvania; or Greensburg, Pennsylvania. It is served by two railroads, the Baltimore and Ohio and the Monongahela, which is owned jointly by the Baltimore and Ohio,

the Pennsylvania, and the Pittsburgh and Lake Erie (New York Central System).

Motorists can reach Morgantown from the National Pike (U. S. Route 40) through Uniontown or Washington, Pennsylvania; Wheeling, West Virginia; or Cumberland, Maryland; and from the Northwestern Turnpike (U. S. Route 50) by way of Oakland, Maryland, or Grafton, West Virginia.

Morgantown is served by the national network of motorbus lines through the Blue Ridge (Greyhound), Mountaineer Transportation Company, Reynolds Lines, and West Virginia Transportation Company (Baltimore and Ohio Railroad) systems.

THE PHYSICAL PLANT

West Virginia University's Campus comprises about 66 acres near the center of Morgantown on high ground overlooking the river and much of the surrounding countryside. The physical plant includes 36 state-owned buildings or structures on the Campus, five demonstration and experimental farms near Morgantown, three experimental farms and two agricultural extension centers located at suitable points throughout the state, a summer surveying camp for Civil and Mining Engineering students, and a summer camp for Forestry students.

The structures on the main Campus, with dates of construction or acquisition, are: Martin Hall (1870), Experiment Station Building (1873), Woodburn Hall (1874), Commencement Hall* (1889), Science Hall (1893), Mechanical Hall (1902), Armory (1902), Old Library (1902), President's House (1905), Heating Plant (1906), Music Building (1914), Horticulture Greenhouse (1915), Medical Building (1916), Oglebay Hall (1918), Oglebay Annex (1933 and 1937), Women's Hall (1919), Plant Pathology Greenhouse (1920), Law Building (1923), Mountaineer Field (1924), Cafeteria (1924), Hall of Chemistry (1925), Men's Field House (1928), Elizabeth Moore Hall (1928), University Library (1931), University Rural High School (1933), two wings to Women's Hall (1935), Men's Dormitory (1935), Beaumont House (1937), Alexander Wade School (1939), Mineral Industries Building (1942), University Health Center (1942), Terrace Hall (1942), Home Management House (1942), Library Commission (formerly Health Service) (1942), Forestry Building (1946), two Annexes (1946), Cafeteria (1947), and Recreation Building (1947).

The farms, with dates of acquisition, are: Dairy Husbandry Farm, 175 acres (1899) and 29.5 acres (1941); Horticulture Farm, 62.5 acres (1916); Animal Husbandry Farm, 321 acres (1916) and 262.5 acres (1941), including a portion for poultry husbandry; Agronomy Farm, 102 acres (1916) (6 acres donated to College of Engineering for aeroplane hangar in 1943, 15.7 acres transferred to City of Morgantown (1946) for runway extension in exchange for 52.3 acres at County Farm); total acreage of Agronomy Farm, 132.6 (1947); and Poultry Husbandry Farm, 20 acres (1916), all near Morgantown; University Experiment Farm at Kearneysville, Jefferson County, 158 acres (1930); Reymann Memorial Farms at Wardensville, Hardy County, 930 acres (1917) and 57 acres (1943); Lakin Experiment Farm at Lakin, Mason County, 74 acres, leased from the State Board of Control (1921); Reedsville Experiment Farm, Preston County, 457 acres (1944); Point Pleasant, 88 acres (1947).

The agricultural extension centers, with the dates of establishment, are: the 4-H Club Camp at Jackson's Mill, Lewis County (1921), and the Recreation Center at Oglebay Park, Ohio County (1926).

FUNDS

The funds for maintaining the University, the Agricultural Experiment Station, the Engineering Experiment Station, the Mining and Industrial Extension Division, and the Agricultural Extension Division are derived from the following sources: (1) Interest on the land-grant endowment of $115,300; (2) the Morrill-Nelson fund; (3) the Hatch fund; (4) the Adams fund; (5) the Smith-Hughes and the Smith-Lever funds; (6) the Purnell fund; (7) the Capper-Ketcham fund; (8) the Bankhead-Jones fund; (9) the Bankhead-Flannagan fund; (10) the Farm Labor fund; (11) the Research and Marketing Act fund; (12) biennial appropriations by the Legislature; (13) fees and tuition; (14) income derived from the sale of farm and dairy products as well as income from athletics, dormitories, dining halls, bookstore, student activities, etc; and (15) contributions by private benefactors for the support of scholarships, loan funds, and prizes.

GOVERNMENT AND ORGANIZATION

Direction of the educational, administrative, financial, and business affairs of the University is vested in the Board of Governors. The board is bipartisan and consists of nine members who are appointed by the Governor with staggered terms of service.

West Virginia University is on the approved list of the Association of American Universities and is a member of The North Central Association of Colleges and Secondary Schools.

The University year is divided into two semesters of approximately 18 weeks each and a Summer Session of 2 terms of approximately 6 weeks each.

Acting in an advisory capacity to the President and assisting him in carrying out established University policies is a **Council of Administration,** composed of the president, the vice-president, the registrar, and the deans and directors of all colleges and schools, as well as other administrative officers who may be called to take part in the deliberations of the Council.

The **University Senate,** a legislative body with jurisdiction over all academic matters that concern the entire University and all matters that concern more than one college or division, is composed of the president, the vice-president, the registrar, all professors, associate professors, and assistant professors in all colleges, schools, and divisions, and all heads of departments.

The **Graduate Faculty,** composed of all members who teach courses on the graduate level, sets the specific requirements and standards of quality for admission to candidacy for graduate degrees and for the award of graduate degrees. For a list of members of the **Graduate Council,** see page 8.

The **Committee on Student Affairs** acts as an integral part of the whole organization of the University. Its program is bound up with that of the University as a whole, designed to serve the larger academic and social objectives of modern education. For a list of members, see page 30.

The Colleges and Schools

The organization of the University, together with the dates of the establishment of the various colleges, etc., follows:

Colleges: College of Arts and Sciences, 1867; College of Law, 1878; College of Engineering and Mechanic Arts, 1887; College of Agriculture, 1897; College of Education, 1927; College of Pharmacy, 1936.

Schools: School of Music, 1897; the Summer Session, 1898; School of Medicine: Courses in Medicine, 1902; School of Mines, 1926; Graduate School, 1930; School of Physical Education and Athletics, 1937; School of Journalism, 1939.

Divisions: Division of Military Science and Tactics, 1867; Division of Forestry, 1937; Division of Home Economics, 1937.

Experiment Stations and Research Bureaus: Agricultural Experiment Station, 1888; Engineering Experiment Station, 1921; Bureau for Government Research, 1931; Division of Documents, 1934.

Extension Service: Agricultural Extension, 1912; Mining and Industrial Extension, 1914; Liberal Arts Extension, 1916; Extension in Education, 1916.

The College of Agriculture, Forestry, and Home Economics; the College of Arts and Sciences; the College of Engineering and Mechanic Arts; the College of Pharmacy; the School of Mines; the School of Music; and the School of Physical Education and Athletics are all degree-granting units admitting freshmen. The College of Education, the College of Law, the School of Journalism, and the School of Medicine are professional colleges and schools requiring from two to three years of academic training as a foundation for professional work. All graduate instruction is administered by the Graduate Council and the Graduate Faculty.

A full description of the organization and offerings of the colleges and schools of the University is found in Part III of this Catalogue.

The Summer Session

The fiftieth Summer Session of the University will be held from June 2 to August 25, 1948. The session will be made up of two terms of six weeks each.

The College of Law will conduct on 8-weeks session. The University Demonstration High School will be in session the first nine weeks for secondary-school student teaching, practice supervision, and observation. The University Laboratory Elementary School will be in session during the first six weeks for elementary-school observation and practice supervision.

The requirements for admission and the character of the work offered are the same for the Summer Session as for the regular academic year.

Credit may be obtained towards the Bachelor's and Master's degree in most of the departments. Offerings are varied from summer to summer so that students may complete the work for the Master's degree by attending summer sessions only.

For complete description of courses, see the **Summer Session Bulletin.**

The Division of Military Science and Tactics

(1) Requirements:

a. West Virginia University, a beneficiary of the Act of Congress of 1862, offers, in time of peace, a four-year and eight-weeks course of instruction in

military science and tactics. Successful completion of the entire course leads to a commission as Second Lieutenant in the Officers' Reserve Corps, United States Army. Honor graduates of West Virginia University successfully completing the entire course are offered commissions as Second Lieutenant in the Regular Army, under conditions prescribed by law.

b. The course comprises two years of elementary (Military Science 1, 2, 3, and 4), two years of advanced training (Military Science 105, 106, 107, and 108), and a Summer Camp of eight weeks' duration during the summer normally following the Junior year. The Summer Camp is conducted at government expense, and eligible students are paid $75 monthly in addition to traveling expenses for the full period of attendance.

c. All male students not specifically exempt by the provisions of the appropriate paragraph below are required by chapter eighteen, article eleven, of the official code of West Virginia, and by orders of the Board of Governors of the University, to complete satisfactorily the entire elementary course as a prerequisite to graduation from the University. This work may be taken as enrolled or nonenrolled members of the Officers' Training Corps. To be enrolled in the R. O. T. C., a student must successfully pass the prescribed qualifying examinations and be physically fit for subsequent voluntary service as a commissioned officer of the Army. Quota limitations for both elementary and advanced military science are set by the War Department and cannot be exceeded without special authority.

(2) The Curriculum:

a. Elementary instruction is given for three hours per week throughout the two semesters of each school year. Two hours' credit is allowed for each semester's work.

b. The third and fourth years of instruction in military science, normally corresponding to the Junior and Senior years of the student, comprise the advanced course and are entirely elective on part of the student and highly selective on part of the Professor of Military Science and Tactics. Application for advanced training should be made not later than the end of the preceding school year to insure favorable consideration. Instruction is given in Infantry, Corps of Engineers, Air Corps, and Signal Corps, on basis of five hours per week. Three hours' credit is allowed for each semester completed.

c. Army veterans with 12 months or more of service are eligible to apply for enrollment in the advanced course immediately upon entrance into the University for the fall semester. No enrollments for this course will initially be made at any other time. Veterans with less than 12 months' service, but more than six, will be eligible to apply for enrollment in the advanced course only upon completion of M. S. 3 and M. S. 4.

(3) Allowances:

a. Commutation of subsistence, in the amount of the current value of the Army field ration, will be paid monthly to each student taking the advanced course. Proposed legislation now in the hands of Congress will raise this daily allowance by $1. In addition, officer-type uniforms are furnished all military students by the government.

b. Basic students will be furnished a regulation Army uniform only.

(4) Military Deposit:

Each student must deposit with the Comptroller, at time of registration,

the sum of $10 to cover any loss or damage to Government property while in his possession. This deposit will be refunded at the expiration of the school term upon undamaged return of the property.

(5) Exemptions:

a. The following students will not be required to enroll in the Division of Military Science and Tactics but may elect to do so with the approval of the Professor of Military Science and Tactics:

(1) Those who are not citizens of the United States and do not intend applying for citizenship.

(2) Those who, at time of entrance, are more than 23 years of age, and former students over that age who re-enter the University after an absence of three years.

(4) Students whose studies are entirely within the School of Music.

(3) Graduate students.

(5) Students who are taking only the short course, the special interim courses, or extension work.

(6) Students who at time of matriculation have successfully completed not less than 58 hours of work, and all who have completed the two-year basic ROTC course at an institution maintaining a senior unit. Those who have satisfactorily completed one, two, or three semesters in a senior unit will be allowed comparable credit.

(7) Students who are unable to perform military duty for physical reasons.

b. Exemptions will be determined by the adviser from student's records and from recommendations of the University physician.

c. Veterans of World War II are exempted from taking basic military training (i.e., Military Science 1, 2, 3, and 4). But note paragraph 2 c in connection with advanced course work.

(6) Organization:

The Division of Military Science and Tactics and the conduct of military training is the responsibility of the Professor of Military Science and Tactics, who, together with his military staff, are officers and noncommissioned officers of the Army appointed by the War Department for duty at West Virginia University.

(7) The R.O.T.C. Band:

(a) The R.O.T.C. Band, functioning under the P.M.S. & T., is an integral unit of the University Band, which is sponsored by the Director of the School of Music.

(b) Membership in both R.O.T.C. unit and University Band is drawn from all classes of the various schools and colleges, including the Graduate School. Assignment is determined by audition before the Director of the Band.

The Library

The Library of the University originated in the collection of books owned by Monongalia Academy when the latter was transformed into West Virginia University.

The Library's function is to provide books and related materials for teaching, research, and cultural purposes. It strives to maintain well-balanced col-

lections in all subject fields included in the curricula of the University. Although primarily intended to supply the needs of the Faculty and students of the University, the collections are available to any resident of West Virginia through the Library Extension Service Department, which also borrows books from other libraries for the use of Faculty members and properly accredited graduate students, and makes loans to other institutions.

The Library contains over 200,000 volumes, besides several million pieces consisting of manuscripts, books, papers, and county court records relating to West Virginia. Over 1000 periodicals are received currently.

The Audio-visual Aids Department has about 530 educational motion-picture films available to members of the University and to groups throughout the state, 250 film strips, a collection of musical recording, and a small collection of slides.

Except during vacations and holidays, the Library is open from 7:55 a.m. to 10:00 p.m., Monday through Friday; from 7:55 a.m. to 5:00 p.m. on Saturday; and from 2:00 p.m. to 5:00 p.m. on Sunday. During periods when the University is not in session, the hours are from 9:00 a.m. to 12:00 noon and 1:30 p. m. to 5:00 p. m., Monday throuugh Friday; 9:00 a. m. to 12:00 noon on Saturday; closed all day Sundays and holidays.

University Extension

The work of this division is under the general supervision of the Director of University Extension. The work given in extension courses corresponds in every particular to that given in the same courses on the Campus. Students taking extension courses for credit must satisfy fully all requirements for admission to the University and, before registering, must file with the Registrar of the University complete official transcripts of record.

The maximum undergraduate credit that may be counted towards any degree for extension work conducted by the University is 48 semester hours. The maximum undergraduate credit that may be counted towards a degree for extension work taken in other institutions is 30 semester hours. No more than 15 hours of work taken in graduate extension courses may be counted towards any graduate degree, and of these only 8 semester hours may be in one field.

No University extension courses may be offered for credit without the approval of the Director of University Extension. Library and laboratory facilities for each course must be approved by the Director and, in the case of courses for graduate credit, by the Graduate Council. Reference books for the use of extension students may be borrowed from the University Library upon the order of the Director of University Extension, subject to the approval of the Library Committee. Postal charges must be paid by the individual or groups for whom the books are borrowed.

A fee of $8.00 per semester hour is charged for each extension course offered for undergraduate credit. A fee of $10.00 per semester hour is chargd for each extension course offered for graduate credit.

For further information write to the Director of University Extension.

The University Book Store

The University Book Store, located on the ground floor of the Law Building, is maintained for the convenience of the students and staff. It is open during customary business hours and keeps on hand constantly textbooks, stationery, drafting-room instruments and supplies, etc., which are available to the staff and students at a discount price. The Book Store also buys and sells used textbooks.

Musical Organizations

The University and Community Orchestra is open to all students who are proficient in the use of orchestral instruments. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Women's Glee Club is open to all University girls who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Men's Glee Club is open to all University men who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University and Community Mixed Chorus is open to all students who can sing a part. Rehearsals are held weekly. Students participating receive 1 hour of credit each semester.

The University Band is open to all University men who can qualify. Concerts are given locally in addition to out-of-town appearances.

University Broadcasting

Broadcasting of radio programs to the people of West Virginia was established at the University in May 1938, when Station WMMN, Fairmont, began a series of noncommercial programs originating on the campus. Since 1940, when Station WAJR was established in Morgantown, University programs have also been broadcast locally. During the school year 1947-48, weekly and other Campus programs are broadcast over WMMN and over WAJR. All are of an educational, informative, or entertaining nature.

The University is prepared to open its doors to all West Virginia stations that wish to broadcast special Campus events.

LIVING ACCOMMODATIONS

The University maintains three large dormitories, one for men and two for women. For information as to accommodations and rates, address the office of the Business Director of Residence Halls. Cost of room and board will be determined later.

The following rules are in effect:

> No student will be permitted to live in other quarters until after the Men's Hall and the Dormitories for Women are fully occupied.
>
> In the assignment of rooms in these buildings all freshmen shall be required to take rooms therein before members of any other classes shall be assigned rooms therein, no freshman being allowed to live outside the dormitories if there is room in them.* In enforcing the

*In dormitories for women, rooms are assigned to freshmen, sophomores, juniors, and seniors.

above rules the following exceptions shall be made:

(1) When the parents or legal guardians of the students reside in Morgantown or within commuting distance of the University, these rules shall not apply.

(2) When the home of the student is within such distance that it is entirely practicable for him to live in his home and reach the University by car or otherwise for all his classes, these rules shall not apply.

(3) When students above the rank of freshman reside in approved sorority or fraternity houses under the supervision of the Director of Student Affairs and the Dean of Women, these rules shall not apply.

(4) When conditions of employment (such as firemen in various buildings and homes, employment on dairy and experimental farms, etc.) require residence on the premises, these rules shall not apply.

When the space is needed for underclass women, no senior sorority woman will be permitted to live in Women's Hall if there is room for her in her sorority house.

Because of the greatly increased enrollment and the shortage of dormitory space, rooms are assigned only to students whose homes are in West Virginia. Assignments are for the academic year. Men's Hall is reserved for freshmen.

More detailed information may be found in the Dormitory Bulletin, a copy of which will be furnished by the office of the Business Director of Residence Halls.

Board and lodging for woman graduate students is available in private dwellings in Morgantown. Board and lodging for men also is available in private dwellings. For information concerning houses on the approved list men should address the office of H. E. Stone, West Virginia University, Morgantown. Women should communicate with the office of the Dean of Women, Morgantown.

Cafeteria

The Cafeteria is open for all three meals, except on Saturday and Sunday. Dinner is not served on Saturday and only the noon meal is served on Sunday.

ADMISSION TO THE UNDERGRADUATE COLLEGES AND SCHOOLS

Methods of Admission

Students are admitted to the University from preparatory schools either by examination or on certificates from accredited secondary schools.[1] In the latter case, the certificates must set forth the work of the student in detail. Diplomas or certificates of a general nature are not sufficient.

Candidates for admission to the University must be at least 16 years of age. If they have attended other colleges or universities, official transcripts including a statement of honorable dismissal must be sent to the Registrar of the University by the Registrar of the other institution.

Candidates for admission who do not present entrance certificates or who come from other institutions of learning without letters of honorable dismissal may, at the discretion of the Committee on Admissions, be allowed to register provisionally. If satisfactory certificates of credit and good standing cannot be

[1] In accrediting West Virginia secondary schools the University follows the classification made by the State Supervisor of High Schools.

obtained, the registration will be cancelled and the fees paid by the applicant will be returned, in accordance with the University refund schedule. A provisional registration will not ordinarily be continued for a period longer than one week.

Entrance Unit Defined

The requirements for admission to the various colleges, schools, and divisions of the University are stated in terms of units.

A unit in any subject represents the amount of work that may be done in a standard high school in a year of 36 weeks, with five recitation periods per week, of no less than 40 minutes each. In courses in which laboratory work is required, from two to three periods of laboratory work are considered the equivalent of one period of recitation according to the amount of outside preparation required in connection with such work.

Graduates of accredited schools receive credit for the work certified, with the understanding, however, that no student may enter any college, school, or division of the University until he has credit for 15 units, i. e., the work of the standard four-year high-school course.

Certification of Entrance Unit

Entrance units should be certified on the blank form prescribed by the University, so that credit values may be readily computed. These certificates should be sent to the Registrar at least 3 weeks before the applicant presents himself for matriculation. Failure to do this will result in delay in registration and may render the student liable for the payment of the $2 late-registration fee. After the certificate has been considered by the Committee on Admissions and the credits recorded, it becomes the property of the University and is permanently filed in the Registrar's office.

Prescribed and Elective Units

A. Fifteen units of high-school work are required for entrance to the University.

B. The following groups are required:
   (1) Four units in English[2]
   (2) Three units in a second subject
   (3) Two units in each of two other subjects.

C. The work in "A" must include the following:

   For admission to all colleges and schools, 1 unit in algebra.

   For admission to the College of Agriculture, in the case of students who elect agriculture or forestry as their major field of study—1 unit in plane geometry.

   For admission to the College of Arts and Sciences, in the case of students who intend to elect chemistry, geology, mathematics, physics, or pre-medical studies as their major field of study— 1 unit in plane geometry.

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[2]A student may enter the University with 3 units in English and satisfy admission requirements by making a satisfactory grade on the English Placement Test, or by successfully completing English 1C, English Composition.

In the College of Engineering and in the School of Mines, a student may enter with only 3 units in English if he also presents for entrance 2 units in a foreign language.

For admission to the College of Engineering or the School of Mines—1½ units in algebra, 1 unit in plane geometry, and ½ unit in solid geometry.[3]

For admission to the College of Pharmacy—1 unit in history and 1 unit in science.

D. Work in the following subjects not to exceed the number of units placed after each subject will be accepted:

Subject	Units
English	4
Journalism	1
Speech	1
Foreign languages[4]	
Latin	4
Greek	3
French	3
German	3
Spanish	3
Italian	3
Education	2
Mathematics	
Algebra	2
Plane geometry	1
Solid geometry	½
Trigonometry	½
History and Economics[5]	
History	3
Civics	1
Economics	1
Sociology	1
Drawing	
Free-hand drawing	1
Mechanical drawing	1
Music (applied)	2

Subject	Units
Science[6]	
Physics	1
Chemistry	1
Biology[7]	1
Botany[7]	1
Zoology[7]	1
Geology	1
General science	1
Physical geography	1
Physiology	½
Commercial geography	½
Commercial law	½
Vocational subjects (not to exceed 4 units)	
Agriculture	4
Household arts	3
Manual training	3
Bookkeeping or bookkeeping and commercial arithmetic	2
Commercial arithmetic (alone)	½
Shorthand	1
Typing	1
Aeronautics	1
Art	1
Hygiene and sanitation	1
Physical education	1

Special Requirements for Admission

The College of Law

All candidates for the degree of Bachelor of Laws must present a minimum of 90 hours of credit from an institution of approved standing. All work taken after June 1, 1947 ,must carry an over-all average of at least 1.3 honor points, or the equivalent. In computing such over-all average one honor point will be deducted for each hour of F. Work taken before June 1, 1947, will be acceptable provided it carries an average grade of C, or one honor point per credit hour, or the equivalent. Non-theory courses in military science and physical education will not be counted either in computing hours of credit or honor points.

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[3]Students entering the College of Engineering or the School of Mines may be admitted conditionally without solid geometry provided they are prepared to take Mathematics 3 as indicated by their grade in the algebra placement test. The deficiency in solid geometry must be made up during the first year.

[4]1 unit of Latin will be accepted. No less than 2 units of either French, German, Greek, Italian, or Spanish will be accepted unless sufficient additional work in that language is taken in college to complete a minimum of 2 units.

[5]A group of 3 units may be formed by combining 2 units of history with 1 unit of civics, economics, or sociology, or with ½ unit each of any two of these subjects.

[6]A group of 2 or 3 units in science may be made by combining 1 unit each of any two or three of the following: physics, chemistry, botany, biology, zoology, geology.

[7]If a student presents either botany or zoology for entrance he may have credit for no more than ½ unit of biology; if he presents both botany and zoology, no credit in biology will be allowed.

Any degree fom an institution of approved standing will be regarded as satisfying the requirements for admision provided, in the opinion of the Scholarship Committee of the College of Law, the degree satisfies the entrance requirements of the Association of American Law Schools.

Every applicant for admission must present to the secretary of the school, before registration, a complete transcript of his record in each institution which he has attended after completion of his secondary education.

No applicant will be admitted who previously shall have attended another law school and who shall be ineligible to return to that school in good standing.

The College of Education:

The requirements for admission to the College of Education shall be the completion of 58 semester hours of approved college work, with an average of at least 1 honor point per credit hour. Candidates for the bachelor's degree in Education register for their first two years of work in the College of Arts and Sciences. Freshmen and sophomores who expect to enter the College of Education will indicate their intention when they register. Their studies will be directed by Professor Elizabeth Stalnaker, adviser for pre-Education students. Such students should so order their courses of study as to satisfy requirements for junior standing and should be fulfilling requirements for the certification of teachers.

The School of Journalism:

A candidate seeking admission to the School of Journalism with the view of obtaining a degree must have satisfied the requirements for matriculation in one of the University undergraduate colleges and must have earned at least 58 semester hours of college credit. A student deficient in physical education and military science will be required to take these subjects as soon as possible. During his freshman and sophomore years he should have completed satisfactorily all or most courses specified for pre-journalism majors. A pre-journalism student not maintaining at least a C average during his first two years in all college subjects is strongly advised not to enroll in the professional school.

The School of Medicine:

In addition to the high-school requirements the applicant for admission to the School of Medicine must have credit for at least three years of work in a college of recognized standing. This must include 90 hours of credit exclusive of military science and physical education.

This 90 hours of credit must include the following subjects and hours: English composition, 6 hours; physics, 8 hours; biological sciences, 12 hours (mainly zoology and comparative anatomy); chemistry, 20 hours (including 6 hours organic); psychology, 3 hours; a modern foreign language, 12 hours (German or French preferred); Latin, 6 hours recommended.

Selection of Students: The number of students the Medical School can accommodate is strictly limited. Applications for admission are considered by the Committee on Admissions of the School of Medicine, which selects those with the highest qualifications of scholarship and personal fitness. An important factor is the score of the applicant in the aptitude test sponsored by the Association of American Medical Colleges and given at suitable times. Applicants are required to take this test unless individually excused by the

Committee on Admissions. Students should consult pre-medical advisers about taking this test. Applications for admission may be made as much as a year in advance of the opening date. Only bona fide residents of West Virginia may be considered for admission.

Further details concerning entrance requirements to the School of Medicine may be obtained by writing to the Dean of the School of Medicine or to the Registrar of the University. A full statement concerning suggested pre-medical courses is to be found in Part III of this Catalogue (page 122).

The School of Music:

Students who meet University entrance requirements are admitted to the School of Music either by examination or on certificate from an accredited secondary school. In case of the latter, the certificate must set forth the work of the student in detail. Students may enter the Applied-music courses in the School of Music at any time during the semester without credit. An examination will be given them to determine what work they are prepared to do. It is to their advantage, however, to enter at the beginning of the semester. Students majoring in Music will be expected to have acquired previously a background in the fundamentals of music and a fair ability in music reading. All students will be examined at least twice a year, in January and in May, to determine the progress made.

In the School of Music special provision may be made to permit talented individuals to take work in Applied Music without credit.

Conditional Admission:

Students must make up all deficiencies before they can be classified as sophomores.

Special Students

Persons who do not desire to become candidates for a degree may, by permission of the Committee on Admissions and of the faculty and dean of the college which they desire to enter, be admitted as special students, subject to the following provisions:

1. Special students must as a rule be 21 years of age.

2. Special students must satisfy at least 9 units of the requirements for admission, including 2 units of English.

3. Every application for admission as a special student must be presented in writing to the Committee on Admissions and must set forth fully the applicant's reason, together with a detailed statement of the studies he desires to pursue.

4. Special students are subject in all respects to the usual rules relating to registration and scholarship. They may be assigned to classes for which they apply, it being understood, however, that admission to any class rests entirely with the instructor in charge, and further, that admission to any class when so granted does not necessarily imply credit for prerequisites.

5. In the College of Law, students with less than the academic credit required of candidates for the degree of Bachelor of Laws will be admitted as special students only if:

(a) they have credit for no less than two years of work of collegiate grade in an institution of approved standing;

(b) they are at least twenty-three years of age;

(c) there is good reason, acceptable to the Scholarship Committee, for thinking that their experience and training have specially equipped them to engage successfully in the study of law, despite the lack of the required college credit; and

(d) the number of such special students admitted each year shall not exceed ten percent of the average number of students admitted by the College of Law as beginning regular law students during the two preceding years.

6. In the School of Mines, special provisions are made for those taking strictly vocational courses.

ADMISSION TO THE GRADUATE SCHOOL

Applicants holding Bachelors' degrees from West Virginia University or from other accredited institutions may be admitted to the Graduate School. The application for admission to the Graduate School must be filed with the Registrar of the University, who will forward the application to the chairman of the Graduate Council. The applicant must request the registrar of the college or university previously attended to send an official transcript directly to the Registrar of the University. The application and the transcript must be received by the Registrar of the University at least one month in advance of registration days. Applications for admission to the Graduate School may be obtained from the Registrar of the University.

Admission to the Graduate School does not constitute admission to candidacy for an advanced degree. The chairman of the Graduate Council and the head of the department in which the student plans to do his major work will advise him concerning departmental prerequisites, major and minor advanced degree requirements, and the additional steps necessary for unconditioned admission to candidacy for an advanced degree.

Eligible students who wish to further their education without reference to higher degrees may be admitted to the Graduate School and may elect courses for which they can satisfy the prerequisites.

ADVANCED STANDING

Application for advanced standing on account of work of college grade done before entrance to the University should be made to the Committee on Admissions not later than two weeks after the applicant's matriculation.

If no certificates are offered or if those offered are considered by the Committee on Admissions to be irregular or insufficient, the Committee will arrange for an examination of the applicant. Upon payment of the examination fee, the Registrar will issue an examination card to the proper department. After examination the head of the department will report to the office of the Registrar the names, numbers, and credit values of the courses, if any, for which the applicant is entitled to credit.

The College of Law:

Applicants for admission to advanced standing must satisfy the ordinary requirements for admission to the first-year class, must have successfully pursued the study of law in a school which is a member of the Association of

American Law Schools, and must have received credit for courses equivalent to those required of students in the College of Law. The extent of credit allowed for work done elsewhere is determined by the Scholarship Committee. However, a student will not be allowed credit for work carried in another law school unless the student receives thereon a grade of C or its equivalent.

Any applicant for advanced standing may also, in the discretion of the faculty, be required to pass examinations in any or all courses presented for credit.

The School of Music:

Advanced standing in applied music is given only by examination. Persons desiring such standing should enroll at the beginning of the semester, and after they have become thoroughly familiar with the requirements for each semester's work, they may take a special examination in which they will prove their ability to meet the requirements as outlined.

The College of Pharmacy:

No student shall be permitted to complete the course in pharmacy in less than three collegiate years in a college of pharmacy, regardless of the amount of credit offered for advanced standing. This is in accordance with the by-laws of the American Association of Colleges of Pharmacy.

Credit in Correspondence Work:

Credit up to a maximum of 30 semester hours for work completed by correspondence in non-laboratory courses will be accepted by the University when such work is given by accredited colleges or universities that accept this work for credit toward their own degrees and whose residence work is accepted by West Virginia University. In compliance with an order of the State Board of Education, however, credits obtained in correspondence courses will not be considered in certifying students for teachers' certificates.

VETERANS OF WORLD WAR II

The University recognizes that men and women from the Armed Forces who enter college require individual and personalized guidance in order to facilitate their entrance into the University and to aid in their adjustment to University life. A special University Veterans Counseling Committee, composed of representatives from several colleges and schools, is prepared to assist veterans in obtaining expert advice for the planning of a program which is best suited to the needs of the individual. In addition, a Veterans Coordinator is available for consultation and help in the solution of personal problems which may arise in the transition to civilian student life.

Information regarding the educational opportunities made possible at the University through the provisions of the Service Men's Readjustment Act of 1944 (G. I. Bill of Rights) and the Vocational Rehabilitation Program of the Veterans Administration (Public Law 16) may be obtained from the Veterans Coordinator, J. C. Gluck, by personal conference or by mail.

Veterans of World War II may be admitted to the University by the Committee on Admissions by any of the following methods:

1. Graduation from an accredited preparatory school.
2. Presentation of 15 units of high-school work without graduation.

3. Advanced standing from other accredited colleges or universities.

4. Evidence of sufficient maturity and ability to do college work furnished by the use of United States Armed Forces Institute tests; American Council on Education tests; or by tests and norms developed locally in any college, school, or department. Training of any kind received in the service will be considered and, if possible, evaluated for entrance or college credit.

5. Veterans who present at least 9 units of entrance credit may be admitted as special students.

6. In some instances, with the approval of the college, school, or division concerned, special short courses may be arranged for veterans who do not meet any of the above-mentioned requirements.

An honorably discharged veteran of World War II who has successfully completed basic training in the Armed Forces of the United States shall be excused from any additional work in Basic Military and in the Physical Education Service Program.

REGISTRATION

Persons who are not registered as students in the University and who are not members of its administrative or teaching staffs shall not be admitted to regular attendance in University classes.

Time and Place of Registration:

All students are expected to register on the days set apart for registration at the beginning of each semester or term of the University. Students in the College of Agriculture, Forestry, and Home Economics, the College of Arts and Sciences, the College of Education, the College of Pharmacy, the Graduate School, the School of Journalism, the School of Music, and the School of Physical Education and Athletics register in the Field House on Beechurst Avenue. Students in the College of Engineering register in Mechanical Hall; students in the School of Mines register in the Mineral Industries building; students in the College of Law register in the College of Law building; and students in the School of Medicine register in the School of Medicine building.

Registration for the first semester, 1948-49, will take place on Saturday, Monday, and Tuesday, September 11, 13, and 14, 1948.

Immediately after completion of their registration, all students are expected to pay their fees at the office of the University Comptroller in the Administration Building.

During registration week all male freshmen will report at the Field House for assignment of lockers, for appointment for physical and medical examinations, and for physical achievement tests.

Freshmen women will report during registration week at Elizabeth Moore Hall for similar examinations and tests.

All freshmen are required to take such intelligence and placement tests as are made part of the Freshman Week program.

College Credit Defined:

A college credit or semester-hour represents the amount of work done in one semester in one recitation hour with two preparation hours a week.

From two to three hours of laboratory work are considered equivalent to one hour of recitation, according to the amount of outside work assigned in connection with the laboratory hours.

Numbering of Courses:

Courses offered in the various colleges and schools of the University are numbered so as to indicate the rank (freshman, sophomore, junior, senior, or graduate) of the students for whom they are intended. See page 90.

Adviser:

The college in which a student is enrolled shall have jurisdiction over the course of study of that student. Each student upon entering the University is assigned to an adviser, whose duty it is to assist the student in his registration, to keep a record of his work, and to report his registration and standing to the Registrar as required. The adviser approves the student's program of studies, sees that all prescribed work is taken in proper sequence, approves the selection of elective courses, and assists the student generally in planning his course of study so that he may proceed systematically and without conflicts. Changes in registration must always have the approval of the adviser. The student will look to his adviser for guidance in all matters pertaining to his work.

Maximum and Minimum Work:

The maximum and minimum number of hours per semester as well as the maximum number of hours per year for which a student may register during the regular academic year of the University are as follows:

	Minimum Hours per Semester	Maximum Hours per Semester	Year
Agriculture	14	20	..
Arts and Sciences	14	18	34
Education	..	18	35
Engineering and Mechanic Arts	14	20	..
Forestry	14	20	..
Home Economics	14	18	34
Journalism	14	18	36
Law	13	16	..
Medicine	17	20	..
Mines	14	20	..
Music	14	20	..
Pharmacy	14	20	..
Physical Education and Athletics	14	20	..

The work of the Summer Session is equivalent in character to that of the regular year. One hour's credit per week is a normal load for either term; but, in order to facilitate scheduling of courses, undergraduate students may carry 7 hours if the periods are 75 minutes in length.

A student desiring to do irregular work, more or less than the prescribed number of hours in any college, must obtain permission from the Committee on Scholarship in his college. This permission is not valid until it has been reported to the Registrar for record.

Late Registration:

No student will be permitted to register in the University after the eighteenth day of a semester or the ninth day of either term of the Summer

Session, without the special permission of the dean of the college or director of the school which he proposes to enter. No student registering late will be permitted to enroll for more hours of work than the number of weeks in actual attendance without the permission of the Committee on Scholarship of the college or school concerned.

Substitution for Required Courses:

A student who desires to substitute another course for any course prescribed in his curriculum or required for the degree toward which he is working, must obtain permission for such substitution from the Committee on Scholarship in his college or school, but there can be no substitution from group to group.

Visitors:

Students who are registered in the University may be permitted to attend classes as visitors, provided they shall have obtained the written permission of their advisers and of the instructors in the classes they desire to visit. Members of the administrative or teaching staffs, or other regular employees of the University, may be permitted to attend classes as visitors, provided they shall have obtained the written permission of the heads of their departments and of the instructors in the classes which they desire to visit.

No record is kept of the work and attendance of persons admitted to classes as visitors and no credit is given for their work in such classes.

Persons eligible to attend classes in the University as visitors may obtain the proper permission blanks from the Registrar.

Withdrawal from the University:

A student who desires to withdraw from the University must obtain a withdrawal card from the office of the Registrar. Withdrawal procedure will be explained to him when he obtains this card.

Students who withdraw from the University without permission will receive at the end of the semester a grade of "FIW" (failure because of irregular withdrawal) in each of the subjects for which they are registered and will be indefinitely suspended from the University.

Students who desire to drop part of their work may withdraw from classes in which they are enrolled with a grade of W at any time prior to the end of the second week following the date set for mid-semester reports. Withdrawal permits must be approved by the adviser and filed with the Registrar. If such withdrawal reduces the student's hours below the required minimum, the permit must be approved by the Scholarship Committee. Withdrawals after the above date will be permitted only in exceptional cases and must be approved by the Scholarship Committee of the college in which the student is registered.

Re-entry after Withdrawal:

Students required to withdraw from one college of the University because of failure in their work and permitted to transfer to another college of the University may not again register in the college in which they were originally registered without the consent of the Scholarship Committee of that college.

Return of Books to the Library:

Students must present a signed statement from the Librarian that they have returned all books and paid all the library fines incurred, before they withdraw. No student will be allowed to graduate before paying all fines and returning all Library books.

UNIVERSITY FEES AND EXPENSES

(Subject to change without notice)

Fees

All fees are due and payable at the Comptroller's office on the day of registration.[1] Students registering pay the following fees:

Semester Fees in the Colleges and Schools

COLLEGE OR SCHOOL	REGULAR YEAR				SUMMER SESSION				REMARKS
	Full Time[2]		Part Time[4]		Full Time[2]		Part Time[4]		
	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	Resident[3]	Non-resident[3]	
Agri. For., H. Ec.	$ 40.00*	$115.00*	$ 3.00 per credit hour	$ 8.00 per credit hour	$ 25 or $ 30†	$ 35 or $ 40†	$ 5.00 per credit hour	$ 7.00 per credit hour	*Includes Contingent fee ($30); Student Activity fee ($7);‡ Health Service fee ($2.50);‡and Hospital fee (50c.)‡ †Either term, lower figure; both terms, higher figure.
Arts and Sciences		Fees in this column include out-of state tuition.							
Education									
Engineering									
Journalism									
Mines									
Physical Education and Athletics									
Music	$ 75.00*	$150.00*							*See above
Pharmacy (See "Special Fees in Pharmacy")	$ 65.00*	$140.00*	$ 4.00 per credit hour	$ 12.50 per credit hour					*See above
Law	$ 65.00*	$190.00*	$ 4.00 per credit hour	$ 12.50 per credit hour	$ 40.00	$ 50.00	$ 8.00 per credit hour	$ 10.00 per credit hour	*See above
Medical Technician (Jr. & Sr. Years)	$ 65.00*	$140.00*			No instruction during the summer				*See above
Medicine	$127.00*	$202.00*	$ 8.00 per credit hour	$ 12.50 per credit hour					

[1]Students who have not paid their fees before the close of office hours of the second Saturday following the opening of a semester or a summer term, shall be dropped from the rolls of the University, and the Registrar shall notify their instructors that their class cards are to be withdrawn.

[2]A full-time student is one who is registered for 10 or more semester-hours of work during each semester of the regular academic year, or 4 or more semester-hours of work during each term of the summer session. A full-time student during the regular academic year receives a student activity book which entitles him to admission to all out-door athletic events and, by the payment of an additional nominal amount at each event, entitles him to admission to all in-door athletic events held in the Field House. A full-time student during the regular academic year, or during the summer session is entitled to free medical consultation and advice from the University physician. A moderate charge is made for room-calls, X-rays, special laboratory tests, drugs furnished by the University Pharmacy, minor operations, treatment of fractures and dislocations, and intravenous treatment.

[3]No person shall be considered eligible to register in the University as a resident student who has not been domiciled in the State of West Virginia for at least twelve consecutive months next preceding his registration. No non-resident

Special Fees

Late-registration fee (nonrefundable)[5]	$ 2.00
Graduation fee[6]	10.00
Professional Engineering degree (including $10 graduation fee)	25.00
Student's record fee[7]	1.00
Certificate in Agriculture, Junior Certificate in Arts and Sciences, or Electronic and Radio Techician Certificate	1.00
Special extra fee for flight training:	
A.E. 101	100.00
A.E. 102	100.00
G. 121	100.00
G. 123	180.00
Special extra fee for Social Work:	
Social Work 311, Field Work	12.50
Social Work 312, Field Work	12.50
Change in registration fee (after 8th day)	1.00
Fee for examination for entrance credit, per unit	1.00
Fee for examination for advanced standing	3.00
Fee for General Educational Development tests (high-school level)	15.00
Social work certificate	2.00
Fee for reinstatement of students dropped from the rolls	3.00
Fee* for examination of candidates for graduate degrees	1.00
Student locker fee (men)	2.50
Student locker fee (women)	2.00
Vocational non-credit, per month	25.00

Special Fees in Medicine and Pharmacy

Students in colleges and schools other than the College of Pharmacy and the School of Medicine who register for courses in the College of Pharmacy or the School of Medicine shall be required to pay a fee of $4.00 per credit hour for such courses in addition to the fees charged in the colleges or schools in which they are registered.

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student may establish domicil in this State, entitling him to reductions or exemptions of tuition, merely by his attendance at the University. A minor student whose parents have become domiciled in West Virginia after the student's original registration in the University, will be deemed to have the domicil of his parents and be entitled to pay resident fees thereafter. Moreover, any student who has originally paid non-resident fees may become entitled to pay resident fees, if after an interim of non-attendance or otherwise he has established a valid legal domicil in this State at least twelve months prior to his re-registration in the University. In any event, the appointment of a guardian for a minor student temporarily resident in West Virginia, other than the designation of a natural guardian, shall not in and of itself operate to establish a West Virginia domicil for such student.

[4]A part-time student is one who is registered for fewer than 10 semester-hours per semester during the regular academic year; or for fewer than 4 semester-hours per term during the summer session.

[5]Charged when students register after registration date announced in the Catalogue, page 5.

[6]The graduation fee is payable by all students at the beginning of the semester or term in which they expect to receive their degrees or diplomas.

[7]One transcript of a student's record is furnished by the Registrar without charge. This fee is charged for furnishing an additional transcript.

*For graduate students not otherwise enrolled at time of final examination.

‡Nonrefundable.

Regularly enrolled students in the College of Pharmacy are given the privilege of enrolling without additional fees in required Pharmacy courses offered in the School of Medicine.

Regularly enrolled pre-medical students in the College of Arts and Sciences are given the privilege of registering for the following courses in the College of Pharmacy without additional charge: Pharmacy 2, Pharmacy 3, Pharmacy 9, Pharmacy 106, and Pharmacy 107.

School of Music Fees

1. **Students Registered for Degrees in the School of Music:**

   In addition to the fees required of all full-time students (see table on page 52), resident and non-resident students registered for degrees in the School of Music pay the following fees each semester: Voice, piano, violin, pipe organ, theory and composition, and public-school music, $35.

2. **Special Students Registered in the School of Music:**

   (a) Theory Courses—Special students registered in the School of Music for theory courses in music shall pay $5 per credit hour for these courses.

   (b) Applied Courses—Special students registered in the School of Music for courses in applied music shall pay tuition fees in each semester as follows: for courses in voice, piano, violin, pipe organ, or band and orchestra instruments—one lesson per week, $35, two lessons, $55. For instrument classes the fee is $5 per semester. In ensemble courses the fee in accompanying is $5 per semester; in chamber music, $5 per semester.

   (c) Special Work in another College or School—Special students registered in the School of Music who take special work in another college or school of the University shall pay music fees plus the regular rate per credit-hour for the work they are taking in another college or school.

3. **Students Registered in Other Schools and Colleges:**

   (a) Theory Courses—Students registered in other schools and colleges of the University may enroll for theory courses in the School of Music without paying additional fees.

   (b) Applied Music—Students in other schools and colleges of the University who enroll for one or more courses in applied music shall pay the regular fees required in the school or college in which they are registered plus music fees as follows: for courses in voice, piano, violin, pipe organ, or band and orchestra instruments, one lesson per week, $20; two lessons, $35.

4. **Piano, Pipe Organ, and Orchestral Instruments for Practice:**

   (a) Piano for Practice—one hour a day, $6 per semester; two hours, $10; three hours, $14; four hours, $18.

   (b) Pipe-organ Practice—one hour a day, $10 per semester.

   (c) Orchestral Instruments—rental fee, $2.50 per semester.

Deposits

The deposits required are as follow: breakage deposit in chemistry, $7 to $12; breakage deposit for students enrolled in medical technology course and in the School of Medicine, $10; for students enrolled in other colleges and schools of the University electing courses in medical technology or medicine, $5 for one laboratory course and $10 for more than one course; military-science deposit, $10; breakage deposit in pharmacy, $10.

Extension of Collegiate Grade

A fee of $8.00 per semester hour is charged for each extension course offered for undergraduate credit. A fee of $10.00 per semester hour is charged for each extension course offered for graduate credit.

Refunding of Fees

A student who withdraws regularly[8] from the University may arrange for a refund of fees by submitting to the Comptroller approval by the Registrar of the refund. Semester fees will be returned in accordance with the following schedule:

	Amount of Refund
During the first and second weeks[9]	All contingent and tuition fees less $2.50
During the third and fourth weeks	80% of contingent and tuition fees
During the fifth and sixth weeks	60% of contingent and tuition fees
During the seventh and eighth weeks	40% of contingent and tuition fees
Beginning with the ninth week	No refunds allowed

Cost of an Academic Year's Work

A student's textbooks will cost from $30 to $50 a year, and his registration fees $80 to $254 if he is a resident; or $230 to $404 if a non-resident. Students in engineering will use drawing instruments costing from $30 to $40. The laboratory breakage deposit required ranges from $5 to $12, a part of which is usually returned at the end of the year. In military science a $10 deposit is required to cover military equipment in the custody of the student, practically all of which is returned to the student when he accounts for his equipment. Board and room may be obtained at from approximately $450 to $525 a year. A student's laundry will cost from $20 to $30 a year. Traveling expenses, clothing, and other miscellaneous items will depend largely upon the tastes and habits of the individual student. In general, however, it may be said that the legitimate cost of a 9-months term of residence at the University ranges from $700 to $900 a year.

REQUIREMENTS FOR DEGREES

Candidates for degrees are eligible for graduation upon the completion of the requirements, in the college or school in which they are registered, which were in effect at the time of their first registration in that college or school, provided they apply for graduation within a period of seven years from the time of their first registration. Students who fail to complete the requirements for graduation within seven years from their first registration in the college or school in which they are candidates for degrees, shall satisfy the requirements in effect at the time they apply for graduation.

All University degrees are conferred by the Board of Governors upon recommendation of the faculties of the various schools and colleges. Degrees are granted at the close of the semester or summer session in which the students complete their work.

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[8]To withdraw regularly a student must apply to the Registrar por permission. The withdrawal permit must be approved by the student's adviser and the Dean of the College and filed in the Registrar's office.

[9]Student Activity fee, Health Service fee, and Hospital fee are nonrefundable.

Candidates for degrees to be conferred at the close of the second semester must be present in person to receive their degrees unless excused by the deans of their colleges or directors of their schools.

Scholastic Standing and Honor Points

Marking System:

A—excellent (given only to students of superior ability and attainment)

B—good (given to those students who are well above the average but who are not in the highest group)

C—fair (average students)

D—poor but passing[1]

E—condition

F—failure

I—incomplete

FIW—failure because of irregular withdrawal

W—all withdrawals prior to the end of the second week following the date set for mid-semester reports.

WP—withdrew passing subsequent to the end of the second week following the date set for mid-semester reports.

WF—withdrew failing subsequent to the end of the second week following the date set for mid-semester reports.

Honor Points:

The quality of a student's work is indicated by honor points.

A tabulation, showing the number of honor points, if any, and the grades for which they are given in the various divisions of the University, follows:

Grade	A	B+	B	C+	C	D	F
All colleges, schools, and divisions except the College of Law[2]	3	—	2	—	1	—	—
College of Law	5	4	3	2	1	—	—

Baccalaureate Degrees

Credits and Honor Points Required:

Less than 6 hours in an ancient or modern language will not be counted toward any University degree, diploma, or certificate unless work in the same language has been offered for entrance.

Six hours of English composition and rhetoric (English 1 and 2) are required of all candidates for the bachelor's degree in all colleges and schools of the University.

Eight hours of military science and tactics are required of all freshmen and sophomore men not specifically exempt.[3]

Two hours of physical education for men, to be taken during the first

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[1]Students are permitted to re-register in any course for which a grade of D has been received. In such cases the second grade shall supersede the first, provided it is not lower than D. Veterans of World War II may re-register for courses in which they have a grade of C or higher, but no credit will be given for the new listing.

[2]In the College of Law the sign + after the grades A, B, or C will be used to indicate the differences in standing between students receiving the same letter grade. In the Graduate School, no credits are acceptable toward an advanced degree with a rank lower than C.

[3]See page 39.

year in residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation, except in the case of students entering with advanced standing amounting to 58 semester hours or more.

Each baccalaureate degree is conditioned upon the completion of a specified number of semester hours of credit. For a tabular statement of the number of credit hours required for each degree, see the last column on page 58 under the caption "Classification of Students."

All divisions of the University require minimum standards of scholastic quality. These are expressed in terms of **honor points.** Honor points are computed only on grades earned at West Virginia University (including Potomac State School of West Virginia University), and all courses taken in this institution which are offered towards credit requirements for the degree for which the student is a candidate shall be included in the computation of honor points. The student must maintain an average of one honor point per credit hour in order to be eligible for graduation, except in the College of Law, which requires an average grade of C. The College of Education, in addition to a general average of 1 honor point per credit hour in all subjects, requires an average of 1 honor point per credit hour in Education and in each teaching field.[2]

In order to be eligible for recommendation for any West Virginia high-school teaching certificate, every student in West Virginia University who desires any such certificate must have a general honor-point average of 1.0 and also an honor-point average of 1.0 in each teaching field and in Education.

In all units except the College of Engineering and Mechanic Arts, the Graduate School, the School of Journalism, the College of Law, and the School of Medicine, students may decrease the total number of credit hours required for graduation by doing work of superior quality. For each 8 honor points in excess of 1 honor point per credit hour, the number of credit hours required for graduation may be diminished by one. This does not, however, excuse students from courses required for the degree.

It is the student's responsibility to keep informed on his honor-point standing. This information may be obtained at any time from the dean or director of the college, school, or division in which the student is registered.

Requirements as to Residence:

Students who come to the University from other colleges or universities are advised to make the transfer not later than the beginning of their third year and in no case will a student who matriculates in the University later than October 1 in any year be permitted to receive a degree at the next Commencement.

In special cases students who desire to leave the University at the close of their third year to enter another institution with the purpose of taking a combined course leading to two degrees or of preparing for graduate study may, upon application beforehand to the Committee on Scholarship of the

[2]All applicants for certification are required to present an honor-point average of 1.2 in the first and second teaching fields and in Education.

college or school in which they are registered, be permitted to do the work of the fourth year, or a part thereof, at such other institution and to receive the bachelor's degree from the University upon the presentation of the proper credits.

Except in the College of Law, no student will be granted a bachelor's degree by the University who has not done either a total of 90 hours or the last 30 hours of his work in actual residence at the University.

No student may receive the degree of Bachelor of Laws without at least three semesters in residence at the College of Law and the successful completion of courses aggregating at least one-half of the total number of hours required for graduation.

Classification of Students:

The following table shows the number of semester-hours required for classification as second-year, third-year, and fourth-year students and for graduation, according to the curricula in the several colleges, schools, and divisions. First-year students must satisfy the requirements for admission as set forth on pages 42 to 44 inclusive.

COLLEGE AND DEGREE	Hours Required to Classify As			
ARTS AND SCIENCES	Second-Year Student	Third-Year Student	Fourth-Year Student	Hours Required for Degree
Bachelor of Arts (A.B.)				
Regular	25	58	92	128
Pre-Medical	32	58	96	128
Combined (Medicine)[1]	32	58	96	132
Combined (Law)[2]	25	58	96	124
Bachelor of Science (B.S.)				
Business Administration	32	58	99	132
Chemistry	34	58	103	136
Combined (Medicine)[3]	32	58	96	132
Social Work	25	58	92	128
AGRICULTURE, FORESTRY, AND HOME ECONOMICS				
B. S. (Bachelor of Science)	26	64	100	144
B. S. in Agriculture (B. S. Agr.)	26	64	100	144
B. S. in Forestry (B. S. F.)	30	70	110	150
B. S. in Home Economics (B. S. H. E.)	25	58	92	128
EDUCATION[4]				
B. S. in Education (B. S. Ed.)	..	58	92	128
ENGINEERING[5]				
Bachelor of Science in Recreation	27	60	94	133
B. S. in Aero. Eng'g (B. S. A. E.)	30	72	112	152
B. S. in Chem. Eng'g (B. S. Ch. E.)	30	72	112	152
B. S. in Civil Eng'g (B. S. C. E.)	30	72	112	152

[1]Fourth year in School of Medicine.
[2]Fourth year in College of Law.
[3]Third and fourth years in School of Medicine.
[4]For the degree of Bachelor of Science in Education, at least 10 hours of the residence work must be in Education.
[5]Students matriculating with 58 or more hours of credit may graduate with 148 hours, since physical education is not required of these students.

COLLEGE AND DEGREE	Hours Required to Classify as Second-Year Student	Third-Year Student	Fourth-Year Student	Hours Required for Degree
B. S. in Elec. Eng'g (B. S. E. E.)	30	72	112	152
B. S. in Mech. Eng'g (B. S. M. E.)	30	72	112	152
JOURNALISM				
B. S. in Journalism (B. S. J.)	..	60	92	128
LAW				
Bachelor of Laws (LL. B.)	21	50	...	81
MEDICINE				
Bachelor of Science (B. S.)				
Medical Technician	25	58	107	141
MINES[5]				
B. S. in Eng'g of Mines				
(B. S. E. M.)	30	72	112	152
MUSIC				
Bachelor of Music (B. Mus.)	30	64	102	136
PHARMACY				
B. S. in Pharmacy (B. S. Phar.)				
Retail Pharmacy	30	70	108	142
Industrial Pharmacy	30	70	108	144
PHYSICAL EDUCATION AND ATHLETICS				
Bachelor of Science in Physical Education (B. S. P. E.)	28	58	92	128
Bachelor of Science in Recreation (B. S. Rec.) -----------	28	58	94	130

Work Done Out of Residence:

It is the policy of the University to discourage the taking of regular residence courses in absentia. In the case of courses begun at the University and not completed because of illness or for other acceptable reasons however, permission to complete the work in absentia under the direction of the regular University instructors giving the courses may be granted by the Committee on Scholarship; but in such case credit should be given only upon a report of a grade of no less than "C" on final examination.

This regulation does not apply to University extension courses.

Graduate Degrees

Graduate degrees offered by the departments in the University which have been approved for graduate work are as follows:

Master of Arts (A. M.)
Master of Music (Mus. M.)
Master of Science (M. S.)
Master of Science in Chemical Engineering (M. S. Ch. E.)
Master of Science in Electrical Engineering (M. S. E. E.)
Master of Science in Civil Engineering (M. S. C. E.)
Master of Science in Mechanical Engineering (M. S. M. E.)
Master of Science in Medical Biochemistry (M. S. Med. Biochem.)
Master of Science in Engineering of Mines (M. S. E. M.)
Master of Science in Home Economics Education (M. S. H. E. E.)
Master of Science in Biochemistry (M. S.).
Doctor of Philosophy (Ph. D.)

Professional Degrees

The following professional degrees are conferred upon graduates of the College of Engineering and Mechanic Arts of West Virginia University on the basis of practical experience and study in absentia, the presentation of a thesis, and an oral final examination.

Engineer of Mines (E. M.) — Chemical Engineer (Ch. E.)
Mechanical Engineer (M. E.) — Civil Engineer (C. E.)
Electrical Engineer (E. E.)

The professional Certificate of Social Work is awarded to those who meet the following requirements:

1. A minimum (including field work) of 30 semester hours of graduate social-work credit.
2. A minimum of two semesters of supervised field work in selected social agencies (450 clock hours).
3. A grade of C or better in all graduate work.

EXAMINATIONS AND REPORTS

Courses

As a rule all courses extend through one semester only.[1]

Examinations

Mid-semester and Final Examinations:

In practically all courses offered in the University, the student receives both a preliminary or mid-semester grade and a final grade. The mid-semester standing of a student is based on the daily recitation grades and a special test given during one or more regular recitation periods. Mid-semester grades are not entered on the Registrar's records. The final grade is based on the class standing for the entire semester and on a written final examination[2] to which a special period of two or three hours is devoted, except that the manner of determining the final grade of seniors and graduate students provisionally approved for graduation at the end of the semester or term is left with the head of the department. Any student not satisfied with his grade, however, has the right to take the examination with his class if he so desires.

Examination Periods:

Mid-semester examinations are held usually during the week of each semester immediately preceding the day of the mid-semester reports as set forth in the University Calendar. Final examinations are held during the last week of each semester of the academic year, and during the last two days of each term of the Summer Session.

Absence from Examination:

Students are required to take all regular examinations. If a student attends a course throughout the semester and is absent from examination with-

[1]In the College of Law all courses extend either through the entire year or through one semester. No credit will be given for less than an entire course except by special order of the Committee on Scholarship. Grades given at the end of the first semester in courses extending throughout the year are merely indicative of the quality of work done by the student to that point and do not give credit for the part of the course so far pursued. Such first-semester grades may be considered in determining the final grade.

[2]See 12 percent rule under "Absences" on page 62

out permission, the instructor shall count the examination as zero and report the final grade as "F". If, in the opinion of the instructor, the absence of the student was for satisfactory reason, the facct will be recorded on the stuudent's class ticket, the grade "I" will be returned, and the student may, upon application to the instructor, take the examination at a later date.

Conditions and Failures:

If the final grade of a student in any course is "F" it is recorded as a "failure," and the student must take the course again if he desires to receive credit for it. If the final grade is "I" it is recorded as "incomplete." If a grade of "I" is not removed within the following semester, or within the next semester or term in which the student is in residence, by the satisfactory completion of the work of the course it becomes a failure unless special permission to postpone the completion of the work is obtained from the Committee on Scholarship of the college in which the student is registered. A student receiving a grade of "E" may be given a second examination in the subject in which such grade is received, provided he applies for it at the time of his registration. A grade of "E" not removed within the following semester, or within the next semester or term in which the student is in residence, becomes a failure unless special permission to postpone the examination is obtained from the Committee on Scholarship of the college in which the student is registered. If the final grade after a second examination is again "E" it is recorded as a "failure." No grade higher than "C" shall be reported for the removal of a condition. In the College of Law a student who has received a grade of "D" in any course is privileged, but not required, to take the next regular examination in that course in order to raise his grade to one which carries with it honor points.

Reports

Mid-semester grades are reported to students' advisers and to deans but are not recorded in the office of the Registrar.

Final grades are reported by instructors to students' advisers and by them directly to the Registrar's office. Final grades must be in the hands of the class adviser (semester) or the Registrar (summer term)[1] within 48 hours after the closing hour of the examination. This rule also applies to the final grades of all students registered in other colleges or schools of the University who are enrolled in law courses.

The final standing of all seniors provisionally approved for graduation shall be reported by their instructors to the deans or directors of their colleges or schools, and the final standing of all graduate students provisionally approved for graduation shall be reported to the Chairman of the Graduate Council not later than the last day of recitation of the second semester. For this purpose special report cards are supplied by the Registrar.

[1]Final grades are reported by instructors to the Registrar at the end of each term of a Summer Session.

A report of each student's work is made at the close of the semester or Summer Session either to the student himself or to his parent or guardian.

DISCIPLINE

The rules and regulations which students are required to observe are few, simple, and reasonable: civil and orderly conduct; punctuality and regularity in attendance upon all required exercises; reasonable diligence in the performance of the work prescribed; and abstinence from vices.

All matters of discipline are in charge of the Director of Student Affairs and the Committee on Discipline. No student may be expelled without the approval of the President of the University.

Absences

Each instructor shall be responsible for the attendance of students in his classes, and shall report an excessive number of absences to the dean or director of the college in which the student is registered for such action as may be deemed advisable.

Students who must be absent from class for an extended period of time shall obtain permission for such absence from the dean of the college in which they are enrolled.

All women students who wish to be absent from Morgantown while the University is in session must obtain permission in advance from the office of the Dean of Women.

If a student's absences in any course exceed 12 percent of the total number of recitations in the course he is barred from taking the final examination unless special permission to take such examination is given him by the dean or director of the college concerned and by the instructor.

Delinquent Students

The dean or director of each college shall make suitable and effective provisions for handling delinquent students registered in his college, subject to the general regulations.

Probation and Suspension:

Any student who at the end of any semester fails to make a passing grade in courses amounting to at least half of the total number of semester hours for which he is registered at the end of the second week following the date set for midsemester reports shall, unless restored to probationary standing, be suspended from the University except that a freshman subject to the operation of this rule at the end of one semester in residence shall be placed on probation for the succeeding semester.

A student who without permission withdraws from the University or from any class for which he is registered (FIW) shall, unless restored to probationary standing, be suspended from the University.

If a student suspended by operation of one of the above rules re-enters the University and again becomes subject to it, his suspension becomes indefinite.

Any student who fails to make a passing grade in courses amounting to at least half of the total number of semester hours for which he is registered, at the end of the second week following the date set for midsemester reports, shall be placed on probation for the remainder of the semester.

The dean or director of each college shall make periodic reports of the problems arising from delinquent students to the Council of Administration.

All actions of the Committee on Scholarship and of the dean or director of the college that affect the standing of a student shall be reported by the dean to the Registrar.

Duties of Instructors:

Instructors shall report the names of delinquent students to their respective advisers at the beginning of each school month except the month in which a midsemester examination occurs and at such other times as the occasion may arise.

In the event that a student who has not been previously reported for delinquency fails in a subject, the instructor must report to the student's dean or director the reason for the failure.

No report should be made by an instructor until after a conference with the student. If the delinquency is a minor or temporary one, the instructor may await the result of his conference before reporting. Delinquency reports should include all failures to make a passing average and unsatisfactory work on the part of those who are capable of doing a higher grade of work.

All reports shall be made on special blanks and a copy of the report should be given to the student.

Duties of Advisers:

All advisers, upon the receipt of the delinquent reports, shall have conferences with the students concerned and shall endeavor to make such recommendations and adjustments as may be within their power.

If the delinquency is due to continued wilful neglect or to failure in one-half of the work for which the student is registered, the adviser shall report the case to the dean of his college, who may, at his discretion, place the student under the jurisdiction of the Committee on Scholarship, and thereafter the adviser shall carry out the orders and instructions imposed by the dean or the committee.

Duties of the Committee on Scholarship:

The Committee on Scholarship shall have authority to proceed according to its best judgment in regard to delinquent students referred to it for its consideration.

All orders of the committee shall become effective when approved by the dean of the college.

In the exercise of its authority the Committee shall not suspend a student during a semester except for wilful neglect and in cases where the student's class grades are so low that further class attendance would be a waste of time. No suspension shall become effective until approved by the dean of the college.

Student Marriages

If any student under the age of 21 years, who has not been previously married, intends to marry within the school year, he or she must obtain the consent of the parents[1] or guardian before such marriage shall be solemnized, in accordance with the provisions of section 8, chapter 48, revised Official Code of West Virginia, 1931.

In order to insure obedience to both the letter and the spirit of this statute and the policy of the University such student must, not less than one week before said marriage, show satisfactory evidence to the office of the Director of Student Affairs that the consent of the parents or guardian as required by the statute has been obtained.

In the event that such student does not make such showing to the office of the Director of Student Affairs, regardless of where the marriage ceremony is performed, he or she shall, from the date of such marriage, be automatically suspended, and may only be reinstated upon showing satisfactory reason to the Council of Administration why he or she failed to comply with this regulation.

Where both parties to the marriage are students and one has not complied with the above rule, both shall be suspended as provided above.

STUDENT WELFARE

Director of Student Affairs

The activities of student welfare are under the administration of the Director of Student Affairs. The Director's office is on the second floor of the Administration Building.

Dean of Women

All interests of the women students in the University are in charge of a special executive officer of the University, the Dean of Women. The Dean's office is on the main floor of Elizabeth Moore Hall.

Convocation

Convocations are held at such times as the Committee on Convocations and Public Exercises finds appropriate and desirable. Attractive programs are provided consisting of devotional exercises, addresses by distinguished speakers, and musical and other entertainment features of special merit.

Social Center for Women

On the upper campus, opposite Reynolds Hall, is Elizabeth Moore Hall for women, completed in 1928. The building provides for social, recreational, and physical education activities for women students and was named as a memorial to Mrs. Elizabeth I. Moore. The building is so arranged that facilities for social gatherings constitute a separate unit.

[1]Or of the parent living, or, if the parents be living separate and apart, of the one to whom was accorded the custody of such person.

Student Center

The University Armory has been remodeled for use as a temporary student center offering dancing and other recreational facilities. The building is open as a student center from 6:30 to 10:30 p.m. through the week, and from 2:00 to 6:00 p.m. on Sundays. The use of the student center for special group dances and programs on Friday and Saturday nights may be arranged through the Social Committee.

Student Activities

To be eligible to represent the University in public appearances, to hold a staff position on a student publication, to be a candidate for or to hold an office filled by an election conducted by the Student Council, or to be a regular member of the University Band, a student must have earned at least 12 semester hours of credit and 12 honor points (Arts and Sciences standard) during his or her last previous semester in residence. This regulation was temporarily suspended during the war.

Associated Women Students:

All women students of the University are members of the Associated Women Students. The purpose of this association is to regulate all matters pertaining to the student life of its members; to further in every way a spirit of friendliness and unity among the women of the University; to increase their sense of responsibility; and to be a medium for maintaining high scholastic and social standards.

The responsibility for directing the work of the Association rests with the Executive Council, which is composed of the following members: a president, two vice-presidents, a secretary, a treasurer, and a representative from each class. These officers are elected annually by the Association. To be eligible for membership on the Executive Council, a woman must have no less than a "C" average in all her work carried.

In 1921 the Association was admitted to active membership in the intercollegiate Association of Student Government for Women Students.

Religious Foundations and Societies

Foundations:

As at most state university centers, various state and national church boards have established foundations at West Virginia University for the religious education and nurture of students. The churches of Morgantown extend a warm welcome to students of all faiths. The physical plant and equipment of each church is available for social, educational, and recreational activities of students.

Newman Hall, 1481 University Avenue, is the social and religious center established by the West Virginia Diocese of the Roman Catholic Church for students of that and other faiths. Rev. Joseph Wanstreet and Rev. John Reardon are the resident chaplains. Newman Hall is a beautiful building of English collegiate architecture immediately adjacent to the Campus. It is equipped with dormitory facilities for 20 students and also includes a chapel, dining room, lounge, game room, and library.

Trinity Church, Spruce Street, is the center for student work sponsored by the Diocese of West Virginia of the Protestant Episcopal Church and the Church Society for College Work. This work is under direction of the rector, Rev. Harold M. Wilson. The program includes corporate student worship services and meetings of the Canterbury Club, which is one of the National Association of Canterbury Clubs, for discussion and fellowship.

The Westminster Foundation of West Virginia represents the cooperative efforts of the Boards of Christian Education and National Missions of the Presbyterian Church, U. S. A., and of the Synod of West Virginia of the Presbyterian Church, U. S., to make the Christian religion a vital factor in the experiences of students and in the relationships which these students sustain while in the University; and also, through guided Christian activities in the mine-camp communities surrounding Morgantown, to train among educated men and women future Christian statesmen. The Rev. Wm. C. Swartz, 304 Willey Street, is the student pastor and director.

Wesley Foundation, 503 High Street, is a center for Methodist students. There are three attractive rooms, a kitchenette, and an office. The students are organized into a working cabinet and carry forward a religious educational program consisting of workship, study, fellowship, community service, mining-camp missions, and other extension activities. The program is under direction of Dr. Thomas L. Hooper, pastor of Wesley Church, with a worker to be assigned by the West Virginia Conference of the church as associate director in charge of student activities.

The Baptist Student Fellowship headquarters are at the Baptist Student Center, 540 Spruce Street, under the administration of the Rev. Parker Burroughs, student pastor. Dr. O. O. Dietz is pastor of the church. The program includes participation in Bible School, worship services of the church. B. S. F., and service in mission churches in nearby districts. Student activites are democratically organized and depend in large measure on student initiative and leadership.

The Hillel Foundation at West Virginia University, 240 High Street, represents the combined efforts of the West Virginia B'nai B'rith Lodges and of the National B'nai B'rith Hillel Foundation to bring the University's students together in religious, cultural, and social activities. The Foundation is under direction of Rabbi Justin Hofmann. Prominent lecturers and speakers are featured at regular intervals by the Foundation for the members of the group and for the general student body.

St. Paul's Lutheran Church is the center of Lutheran student activities sponsored by the Student Service Commission of the National Lutheran Council, the Synod of West Virginia, and St. Paul's Lutheran Church. This work is under direction of the Rev. W. Roy Hashinger, local pastor. The program includes the regular services of the church and the activities of the Lutheran Student Association.

Bethany Foundation provides a program for Christian Church students attending West Virginia University. The Foundation is sponsored by the Department of Religious Education of the United Christian Missionary Society (Indianapolis, Ind.), the West Virginia Christian Missionary Society (Huntington, W.

Va.), and the First Christian Church of Morgantown. These three agencies function through a Student Work Advisory Committee. The First Christian Church is the center for Foundation activities and is located at 447 Spruce Street. Mrs. Jean Hanan is director of the Foundation and the Rev. Benton Roy Hanan is pastor of the Church.

Other churches, while not having special buildings or workers for University students, make definite contributions in ministering to the religious and social needs of University students who belong to their particular faiths. It should be stated in this connection that college students are welcome in all of our churches regardless of what their church affiliations may be, or indeed whether they have any.

Societies:

The University Young Men's Christian Association of West Virginia University is a nonsectarian fellowship of students and faculty united in the desire to encourage all-around personal and social development in the light of religious principles. Student officers, a student cabinet, a board of directors, and a full-time general secretary direct its activities. The various committees, commissions, and interest groups provide not only their immediate ends but also abundant opportunity for fellowship and leadership training. The YMCA office is located on the second floor of the Administration Building with William H. Henderson the General Secretary. The Association is affiliated with the world-wide YMCA movement and with the Student Christian Movements.

Young Women's Christian Association is a voluntary group of women in the University organized for the purpose of promoting and directing widely varied activities for a religious motive. Through its national and international organization, the Y. W. C. A. joins in fellowship with students throughout the world. Membership in the Campus organization is open to all women students in the University who are in agreement with its purpose. The Y. W. C. A. headquarters are located on the second floor of Elizabeth Moore Hall, and LaRue Shannon Coombs directs the activities of the organization.

Church organizations. The following organizations have been established by Morgantown churches for the purpose of providing wholesome social activities for the students: Kappa Phi and Delta Sigma Theta—Methodist.

Student Social Life

The social life of the students in the University is under the general supervision of the Committee on Social Affairs. This Committee has supervision of every social function given by the University or by an organization within it, including fraternities, sororities, and other student societies. Such social functions as dances, picnics, excursions, and receptions are supervised by this Committee.

PHYSICAL EDUCATION AND ATHLETICS

Service Programs for Men and Women

Two hours of physical education for men, to be taken during the first year in residence; and four hours of physical education for women, to be taken during the first and second year in residence, are required for gradua-

tion of students presenting fewer than 58 hours, unless previous credit has been allowed.

Each student who is required to register for physical education is given a complete medical and physical examination at the beginning of the University school year to determine his fitness for active participation in University activities of any description. See Part III for more extended information on the course offerings of these departments.

Intramural Sports

The department of intramural sports for men is organized as one of the departments of the School of Physical Education and Athletics. It is the aim of this department to encourage the entire student body of the University to participate in organized athletic sports and wholesome, active recreation. Competition will be promoted between student groups, faculty groups, and individuals. The units which are now the natural groups on campus, such as class, fraternity, and unorganized or non-fraternity groups, will form the basis for activities in competitive sports and recreation. It is the desire of the department to foster a spirit of fair play and good sportsmanship in all competition.

All students regularly enrolled in any department in the University shall be eligible to enjoy the intramural privileges, except that they must satisfy certain eligibility requirements for the various activities. All students who are members of the Varsity or freshman squads in a sport, or who have earned a Varsity award (WV) in a sport, shall be ineligible for intramural competition in that particular sport. All students who have won a Varsity award in a sport from another institution of college rank shall be ineligible for intramural competition in that particular sport. Winning a Varsity award in one sport such as basketball will not bar a student from participation in another intramural sport such as baseball. See **Bulletin of the Department of Intramural Sports.**

All competitions conducted by the department are under the control of the Administrative Board composed of the Dean of the School of Physical Education and Athletics, Director of Intramural Sports, Director of the Service Program for Men, Director of Intercollegiate Athletics, Supervisor of Activities, and the senior managers. The coaches of the various Varsity sports are ex officio members of the Administrative Board and vote on questions of eligibility or protests which concern the particular sport they may coach.

The following activities are conducted: speedball, touch football, badminton, volleyball, handball, basketball, indoor track, ping-pong, relays, bowling, basketball free-throwing, softball, horseshoes, and outdor track. Other activities may be promoted when there is sufficient interest on the part of the students and were facilities are available. Leagues will be organized to accommodate classes, fraternities, and non-fraternity or unorganized groups.

Intramural Sports for Women:

The Women's Recreation Association, together with the department of service program for women of the School of Physical Education and Athletics, sponsors the intramural athletic activities for women. It is the aim of these

two groups to encourage all women students to participate in organized sports as a recreational activity. Competition takes place between the organized groups on the Campus such as sorority, dormitory, church, independent, and class groups.

All women enrolled in the University are eligible to play in any intramural tournament. The number of physical education majors permitted to play on any one team is restricted. Interclass tournaments in volleyball, basketball, and baseball are held each year for the professional students in physical education.

The following activities are conducted: field hockey, soccer, horseshoes, tennis, volleyball, badminton, foul-throwing, swimming, basketball, bowling, tumbling, table tennis, softball, and archery. As the demand for more activities develops, the facilities will be increased and the program broadened.

Intercollegiate Athletics

The activities of the Department of Intercollegiate Athletics are administered by the Director of Intercollegiate Athletics and by the Athletic Council. The council is composed of eight members: four faculty, two alumni, one student, and one member of the Board of Governors (ex officio). The Dean of the School of Physical Education and Athletics serves as a member, and the Director of Athletics is the executive officer. Instruction and training are given each year in the seasonal sports such as football and cross-country; basketball, boxing, and wrestling; baseball, track, tennis, and golf. Matters concerning athletic eligibility are decided by the Athletic Council, and scholastic eligibility regulations are established by the Faculty of the University.

THE UNIVERSITY HEALTH SERVICE

The University Health Service, which is a part of the organization of the School of Medicine, is maintained to provide medical service to the students of the University and to supervise general health conditions on the Campus. The staff includes four physicians, two nurses, and two laboratory technicians, together with the required clerical personnel. The University Pharmacy, where students may obtain medicine, is managed by the College of Pharmacy. The departments of pathology and bacteriology cooperate in the laboratory examination of diagnostic materials.

The Health Service occupies a well-designed University Health Center constructed in 1941. This three-story building is centrally located on the Campus, fronting on College Avenue adjacent to Reynolds Hall. It is built of brick and concrete and is fireproof throughout. On the first floor are the treatment and operating rooms, offices, and pharmacy. The second floor is occupied by the Laboratory and X-ray departments, together with the department of pathology. Physicians are in attendance during the regular session from 9:00 a.m. to 12:00 noon daily except Sunday, and 2:00 p.m. to 5:00 p.m. daily except Saturday afternoon and Sunday. Medical aid may be obtained at any time by calling Extension 323 on the University exchange. The University Pharmacy is open from 9:00 a. m. to 12:00 noon and 2:00 to 5:00 p. m.

Each regularly enrolled University student pays a fee which provides for medical consultation and advice from the University physicians. Moderate

additional charges are made for room calls, X-rays, laboratory tests, minor operations, treatment of fractures, intravenous treatment, and drugs furnished by the pharmacy.

When a student enters the University for the first time, he receives a complete physical examination which includes a blood test and urine analysis. The Health Service also gives special physical examinations to students in competitive athletics, to University food handlers, to employees of buildings and grounds, and to other groups as occasion may arise.

Student Hospital Service

Each full-time student of West Virginia University shall have added to his regular semester fees a hospital fee of fifty cents ($0.50) per semester, for which he shall be furnished hospital care as hereinafter provided in either the Heiskell Memorial Hospital, Morgantown, West Virginia, or the Monongalia General Hospital, Morgantown, as ordered by a physician of the Health Service of West Virginia University, subject to the approval of the Director of the Student Health Service. Students in the Summer Sessions shall not be covered by this contract.

In the event of acute illness or accidental injury which necessitates hospitalization, each student shall be entitled to receive hospital service in either hospital mentioned above. Hospital service shall include room accommodation,* meals, general nursing care, hypodermics, use of operating room, three X-ray examinations to one illness, ailment, or injury, as ordered by the attending physician during hospitalization, routine laboratory service as ordered by the attending physician during hospitalization, routine medicines and dressings as supplied by the hospital, plaster casts, and all routine hospital service.

Hospital service to be supplied shall not include the following:

Vaccines, serums, X-ray therapy, artificial eyes, orthopedic appliances, crutches, diagnostic dental X-ray, or basal metabolism.

Hospital care shall not be furnished in the following cases:

Injuries resulting from brawls, strikes, riots, or insurrection; wilfully self-inflicted injuries; acute venereal diseases; insanity; drug addiction; alcoholism; and pulmonary tuberculosis.

Hospital care herein provided for shall be furnished only to students who pay full fees and not to part-time students.

Students registering for the first semester of the academic year shall receive benefits from the date of registration to twelve o'clock midnight of the last day of registration for the second semester. Students registering for the second semester of the academic year shall receive benefits from the date of registration to twelve o'clock midnight of the day on which Commencement Exercises are held, or the closing day of the semester if this day is not prior to Commencement Day. In case of accidental injury or emergency illness while traveling outside the area served by the Hospital Service, and where the student of necessity shall have to be cared for in a hospital having no connection with the Hospital Service, then the Hospital Service shall allow

*Not to exceed $5.00 daily.

$5.00 a day for a period not to exceed 10 days for all services received in such hospital. Students shall be eligible for hospital benefits described as above only so long as they are members in good standing of West Virginia University: i.e., should a student be dropped from the University register for any reason, his contract shall be cancelled automatically and his hospital fee forfeited.

Each student shall be entitled to an aggregate of thirty days of hospitalization during each school year, provided, however, that in case of continuing illness, if hospitalization should be begun during a given semester or term but not completed by the end of such semester or term, the student shall be entitled, in the aggregate, to the same period of hospitalization to which he would have been entitled if he had completed it during such semester or term.

Should a student remain in a hospital after having been discharged as a hospital patient by the attending physician, such student shall be responsible to the hospital for the payment of its regular charges for hospitalization after the date of such discharge, and the Hospital Service shall not be liable therefor. This however shall not prevent the student from again entering a hospital for the remainder of the thirty days as herein provided.

Should a student receive hospital service by reason of accidental injuries suffered through the fault or negligence of another party, and the expenses of such injuries be collected by suit or settlement, then said student shall reimburse the Hospital Service; or should part of the expenses of such hospital services be collected by suit or settlement on account of such injuries, then said student shall reimburse the Hospital Service to the extent that such expenses may be so collected.

EMPLOYMENT AND PLACEMENT SERVICE

Student Employment:

Students desiring part-time work may register with H. E. Stone, Secretary of Loans and Placement, either before arrival in Morgantown or after enrollment.

Until the successful completion of at least one semester's regular University curricular work, freshmen should not attempt outside work in self-support unless absolutely necessary. Only the exceptional student can engage in such work during the first semester without danger to his scholastic status.

The Senior and Graduate Placement Service:

The University Placement Service for non-teaching positions is in charge of H. E. Stone, Secretary of Loans and Placement. Alumni, seniors, drop-outs, and other students desiring pre-placement guidance or placement assistance may avail themselves of these services.

This bureau in Room 207, Administration Building, registers candidates for positions, interviews registrants, analyzes the changing markets for graduates, studies the policies and practices of employers in dealing with the college product, arranges interviews between employers and candidates, aids students with regard to the techniques of the employment interview, assists graduates seeking promotion or change of position, cooperates with all individuals and agencies interested in placement, and engages in continuous research in the interest of improving these services.

Contacts with employers have resulted in increased visits to the Campus by personnel men from industrial and commercial corporations and in saving time for them on the occasion of their visits. An extensive employer-contact file has also been built up.

The Placement Service works aggressively to supplement, stimulate, and extend placement activities in the University. The U. S. Civil Service, employment agencies, leading corporations, and the departments, divisions, and colleges of the University cooperate freely with the central placement service. Standard placement application forms are supplied on request.

Pre-placement and Placement Guidance:

Educational and occupational guidance in the earlier college years shade off into direct placement guidance and assistance during the senior year and into follow-up or occupational adjustment service after graduation. A placement guidance service is therefore maintained, including an occupational information bureau with a large and expanding collection of books, booklets, leaflets, and other material on careers open to university-trained men and women. An extensive file of company booklets and magazines, federal bulletins, and Civil Service announcements is also available for consultation by registrants.

The Teacher-Placement Bureau:

The College of Education, in cooperation with other units of the University, maintains a Teacher-Placement Bureau which makes available to school officials the credentials of students and alumni who are candidates for school positions. The facilities of the Bureau are available to students in both the regular and Summer Sessions. No charge is made for this service.

Blanks for registration will be furnished upon application. The regular annual enrollment in the Bureau takes place the second week in February.

While a conscientious effort is made to place all worthy applicants, no one is assured a position. General letters of recommendation are not given to candidates. Information in the files of the Bureau is regarded as confidential. The Bureau cannot undertake to furnish copies of its records to commercial or other private placement bureaus.

The Pharmacists' Register:

A pharmacists' register for the benefit of both the employer and employee has been established by the College of Pharmacy. No charge is made for services rendered.

GIFTS, SCHOLARSHIPS, AND LOAN FUNDS

Several individuals, as well as national patriotic, educational, fraternal, and religious organizations, have established scholarships, loan funds, prizes, trophies, and medals for students in the University.

Gifts

Carnegie Corporation Music Collection—Thanks to the generosity of the Trustees of the Carnegie Corporation of New York, West Virginia University in 1936 received as a gift, designed to stimulate and develop an interest in music culturally on the part of the entire student body, a Music Collection that cost the corporation $2,500. The set includes:

An electric phonograph of special design for use in small rooms and

auditoriums; approximately 900 records, chosen as an anthology of recorded music, ancient and modern, from oriental and occidental countries; an oak cabinet with approximately 75 buckram albums in which to keep the records; a duplicate set of printed 3"x5" card indexes of all records in the set, classified by composers, titles, mediums, forms, etc.; bound copies of full scores, when published in miniature, also bound vocal scores of operas and oratorios, which are included for all completely recorded works in the set; lastly, a selection of about 100 books on musical subjects, historical and biographical, and works of reference.

This Music Collection is attractively housed in Elizabeth Moore Hall and its use is administered under regulations designed to make it of greatest possible value to the students of the University.

Grants

Pittsburgh Screw and Bolt Company—A fund of $1,000 for preparation and printing of a bulletin. Studies of effect of screw dowels and other connectors in increasing shearing strength of wooden beams.

The Sears-Roebuck Foundation has granted to the Agricultural Experiment Station, beginning in 1944 to the present. $26,300 for subsidizing the hillculture project, which is designed to increase the income of the farm family.

Swift & Company has granted to the Agricultural Experiment Station since 1944 a total of $21,500 for the purpose of studies on the digestibility and composition of feeding stuffs by farm animals.

The Burpee Award--An annual award of $100 is made possible by a grant from the W. Atlee Burpee Company, Philadelphia, Pa., and Clinton, Iowa. The award is granted on the basis of scholarship, practical experience, and interest in flower and vegetable growing. The recipient must have the recommendation of the Dean of Agriculture and of the Department of Horticulture.

Scholarships

American Bankers Association Foundation for Education in Economics Loan Scholarships--The American Bankers Association Foundation for Education in Economics has assigned to West Virginia University three scholarships of $250 each. These scholarships will be "awarded only to deserving students of integrity, intelligence, character, competency, and aptitude, whose means of support are dependent wholly or in part on their own labor, to enable them to continue the study of courses in banking and economics in classes of junior grade or above. Scholarship of the highest rank will not be a definite requirement for a loan scholarship award; however, the Foundation desires to encourage students who will become leaders in professional or business life and does not wish loan scholarships granted to mediocre or inferior students." The holders of these scholarships are eligible for one reappointment. The loan is without interest until the first day of the second January after the recipient leaves the University. Beginning on that date interest accrues at the rate of five (5%) percent per year, and repayment of both

principal and interest in sums of no less than $10 monthly must likewise then begin.

Walter Haines South Memorial Scholarship—To perpetuate the name of her deceased brother, a graduate of the University, Mrs. Frederick J. Knutti of Morgantown has created The Walter Haines South Memorial Scholarship. This scholarship, open to deserving men, involves a total of $500 per annum. This fund has been placed in the hands of the West Virginia University Student Loan Fund Corporation for administration. Under the plan of operation of this fund, some one person will be selected who will receive the entire amount of this scholarship fund, without interest, while he is an undergraduate. The amount lent will be repaid over a period of four years after graduation.

The Board of Governors Scholarships—On April 5, 1945, the Board of Governors of West Virginia University authorized the establishment of 25 scholarships to be awarded annually to high-school graduates. The first awards were made for the academic year 1946-47. The scholarships entitle recipients to remission of all fees, except those payable to state special funds and those chargeable to Special Services. Awards are made on the basis of (1) scholastic attainment, (2) citizenship, loyalty, and personality, (3) character and leadership, and (4) extra-curricular abilities. Applications for these scholarships are made through the Board of Governors' Scholarship Committee and scholarships are awarded on recommendation of the committee and on approval by the Board of Governors. Scholarships remain in effect for four academic years unless revoked for disciplinary reasons, for failure to maintain scholastic standard, or because of withdrawal from the University.

The Board of Governors Scholarships in Music—One of these scholarships is to be awarded in the department of voice, one in the department of violin, and one in the department of piano. There will be both preliminary and final contests in voice, in violin, and in piano. Those eligible to take part in the contests will be West Virginia high-school seniors who give promise of becoming eligible for regular enrollment in the School of Music of West Virginia University as candidates for a degree in applied music. Each scholarship to be awarded is to consist of exemption from payment of the contingent fee ($30 each semester) for the four academic years, beginning in the autumn immediately following graduation from high school and the winning of the scholarship.

The holder of a scholarship must maintain each semester a record of achievement deemed by the Scholarship Committee of the School of Music to be worthy of continuance of the award. Preliminary and final contests will be held in Morgantown, on the campus of West Virginia University, and the dates will be announced.

Charles Irwin Travelli Scholarship—This scholarship amounts to $250 a year and permits the holding student to devote his entire time to his University course. (Not reactivated since the war.)

Victor E. Albright Scholarship—This scholarship is worth $200 per year and is to be awarded "to a boy or girl of good character, of fair health and of the White race, who was born and reared in Preston county and who graduated from a high school of Preston county in the year in which the scholarship is given."

Scholarship in Public Speaking—To the winner of first place in each of the four events (debate, oration, extempore speaking and poetry reading) in the West Virginia Interscholastic Public Speaking Contest will be awarded a four-year scholarship in the College of Arts and Sciences of the University.

The Elizabeth Davis Richards Scholarship in English and Poetry—In memory of Elizabeth Davis Richards, well-known West Virginia authoress and patron of the English Club, an annual scholarship in the amount of $50.00 was established by Mr. Del Roy Richards of Morgantown in December, 1936, to be awarded to some worthy upper-division or graduate student in the department of English.

The John Barton Payne Scholarship—The Hon. John Barton Payne, native of Taylor county and late president of the American Red Cross, bequeathed to the University the sum of $12,000, the income from which is to be used to aid two young men—one a native of Taylor county, the other a native of Preston county—to attend the University. Financial need and scholastic merit are prime considerations in making the award.

The Sears Roebuck Agricultural Foundation Scholarships—A grant to the College of Agriculture of $2200 from the Sears Roebuck Agricultural Foundation of Chicago makes possible the awarding of scholarships each year to upwards of 10 needy, deserving farm boys enrolling as freshmen and 1 sophomore in agriculture. Individual scholarships amount to $200 per year.

The selection of the recipients of each of the scholarships is made by the dean and faculty of the College of Agriculture.

The Richard Aspinall Scholarship—This scholarship was established in 1944 by the Morgantown, West Virginia, Moose Lodge. It pays for the tuition, books, room, and board for four years in any undergraduate college on this Campus that the high-ranking student of Mooseheart, Illinois, may elect.

The Southern States Cooperative Scholarship—Each year the most outstanding high-school student in vocational agriculture who is also a member of the West Virginia chapter, Future Farmers of America, and who matriculates in the College of Agriculture will receive a scholarship award of $100 from the Southern States Cooperative, Inc.

The Junior League Scholarship—This scholarship, providing $150 a year for a graduate social-work student, was established in 1942. It is jointly supported by the five leagues of the state. Applicants must be residents of West Virginia, and all applications must be addressed to the head of the department of social work.

The Board of Governors Latin-American Scholarships—These two scholarships are available to Latin-American students for full-time graduate work in the Department of Social Work. They are equivalent to annual non-resident tuition fees; and recipients are selected by the head of the department.

West Virginia Federation of Women's Clubs Pan-American Scholarship—The winner of this scholarship is remitted tuition fees by the Board of Governors and receives room, board, books, and other incidentals from the federation.

The West Virginia Federation of Women's Clubs Scholarship—This scholarship provides $150 a year and is awarded to a full-time student in the Department of Social Work. The recipient, selected by the head of the department, must be a resident of West Virginia.

The Morgantown Service League Scholarship—This scholarship provides $150 a year for a full-time student in the Department of Social Work. The student must be a resident of the state and approved by the head of the department.

The State Department of Public Assistance Scholarships — These social-work scholarships, ranging from small sums up to $125 a month or more, are available to selected employees of the department who hold an undergraduate degree from an accredited college or university. Application for these scholarships must be made to the chief of the Division of Social Services or to the chief of the Division of Child Welfare of the State Department of Public Assistance, Charleston. Such students must also be approved by the head of the Department of Social Work.

The pharmacists of West Virginia, individually and collectively, have provided a number of scholarships in the amount of $150 per year for capable high-school graduates needing financial assistance to assist in their pharmaceutical education. The final selections of these scholarships are made by a committee of the West Virginia State Pharmaceutical Association. Additional information may be obtained from the dean of the College of Pharmacy.

The American Foundation for Pharmaceutical Education—This foundation, in order to stimulate an interest for pharmacy as a profession among capable high-school graduates, has assigned several scholarships to the College of Pharmacy. Each scholarship or grant covers tuition fees for one year. Selections for the awards are made by the faculty of the College and are awarded on the basis of scholarship and financial need. The holder may be eligible for reappointment. Additional information may be obtained from the dean of the College.

The School of Journalism Scholarships—Six scholarships in journalism of $100 each are awarded annually to pre-journalism freshmen and sophomores and to professional juniors and seniors on the basis of ability, scholastic achievement, and promise for a successful journalistic career. Scholarship holders are eligible for reappointment. These scholarships were established in 1945. Two of them are known as the Daily Mail Scholarships and were established by Walter E. Clark and Fred M. Stanton of the Charleston Daily Mail. Two are known as the Lewis Baker Scholarships and were established by Mrs. Guy Despard Goff of New York City in memory of Lewis Baker, her father, who was a newspaper executive in Wheeling. The other two are known as the Ogden Scholarships and were established by the News Publishing Company of Wheeling in honor of the late H. C. Ogden, publisher and alumnus. These scholarships are awarded upon the recommendation of the School of Journalism.

The J. J. Dotson Scholarship—This scholarship was established in 1947 by Gertrude Dotson Bradley of Bethesda, Md., in memory of her father, the late J. J. Dotson, who was publisher of the Nicholas Republican at Richwood, W. Va. The scholarship is in the amount of $100 and is awarded annually to a student in the School of Journalism.

The R. M. Davis Scholarship in Political Science—Mr. R. M. Davis, Morgantown, West Virginia, coal operator, has given to the University the sum

of $5,000 to establish a scholarship in the Department of Political Science. The scholarship with an average annual value of between $300 and $500 will be granted to an undergraduate or graduate student registered in the Department of Political Science whose specialty is international relations. The staff of the department will select the winner. Scholastic standing and qualities of leadership will be given primary consideration in awarding the scholarship. Any West Virginia University student whose major is in political science and who is interested in being considered for this scholarship should write directly to the head of the Department of Political Science.

The Kroger Company Scholarship—The Kroger Company will give three scholarships of $200 each, to be divided between agriculture (one) and home economics (two). Awards on the basis of scholarship and leadership in school, church, F. F. A., F. H. A., 4-H, and other youth activities will be made by the Scholarship Committee of the College of Agriculture, Forestry, and Home Economics.

The Standard Oil Company of New Jersey Scholarship—In 1947 the Standard Oil Company of New Jersey provided a four-year scholarship of $100 per year to a boy in 4-H work in West Virginia. Selection of recipients is made by a committee consisting of the State Director of Extension, the State Club Leader, and the Dean of the College of Agriculture. Selection is made on the basis of need, merit, and ability.

The West Virginia Coal Association Scholarships—The sum of $5,000 per year for each of five years beginning in 1947 was given by the West Virginia Coal Association to establish eight scholarships in coal mining engineering. Each scholarship is for $625 per annum. Nominations for the scholarships may be made by the West Virginia Coal Association, by any member of that body, by any coal-mine superintendent, by any high-school principal or teacher, or by any graduating high-school senior or recent graduate placing himself in nomination. All nominations should be addressed to the Director of the School of Mines, West Virginia University.

The Claude Worthington Benedum Scholarship—This annual scholarship of $850 was established in 1947 by M. L. Benedum of Pittsburgh, Pa., in memory of his son who died in military service during World War I. The recipient shall be a male graduate of Bridgeport, West Virginia, High School, and the selection shall be made by the Principal of the Bridgeport High School and by the Director of Student Affairs at West Virginia University.

The West Virginia Association of Small Loan Companies Scholarship—The winner of this scholarship is selected by the Committee on Prizes, Scholarships, and Loan Funds of the University at the request of the donors and is valued at $150 yer year.

The Central Appalachian Section of the American Institute of Mining and Metallurgical Engineers has awarded three scholarships to boys in Kentucky, West Virginia, and Virginia. These boys are eligible to attend any school in the area giving mining engineering. At present two of them are attending West Virginia University.

The Lakin Roberts Memorial Scholarship—This scholarship is open to graduate students in Education and is worth $200 per year. (Inoperative during the current academic year.)

The KDKA Agricultural Scholarship—To recognize outstanding leadership, to encourage use of radio in disseminating agricultural information, and to help train students in broadcast techniques, Station KDKA, Pittsburgh, Pa., has established this scholarship, amounting to $100, for one junior or senior agricultural student to be chosen each year by the Scholarship Committee of the College of Agriculture, Forestry, and Home Economics.

Fellowships

Armstrong Cork Company Fellowship—A fund of $1200 per year for a fellow, plus $800 a year for supplies and overhead, to study properties of molds for glass-blowing machines.

Bituminous Coal Research, Inc., Fellowship—A fund of $10,000 per year for a fellow and an assistant, and also for current expense and overhead, to study causes of acid formation in mine-drainage waters and to study means for reducing, eliminating, or utilizing such acidity.

Calcium Chloride Association Fellowship—A fund of $3,900 per year for a fellow and an assistant, and also for current expense and equipment, for studies of treatment of coal to eliminate dust and studies of the action of such treated coal on mechanical stokers.

Fuel City Metal Works Fellowship—A fund of $600 for studies of air-conditioning.

International Nickel Company Fellowship—A fund of $1200 per year for a fellow, plus $480 a year for supplies and overhead, for studies of heat transfer through metal walls.

Mines Research Fellowship—A fund of $1200 for studies of various problems relating to mining in West Virginia.

Loan Funds

The following loan funds are administered through the office of the Secretary of Loans and Placement with the cooperation of advisory committees, University officials, and alumni. Applications may be filed with Mr. Stone, 207 Administration Building.

The J. D. Finley Fund—A fund of $1,000 was contributed to the University by the trustees of the estate of the Hon. J. D. Finley of Pittsburgh, Pa., in accordance with his last will and testament, to be used as loans to deserving students in the School of Medicine

The Theodore Smith Fund—On April 13, 1930, Theodore Smith was drowned in the Monongahela River. His tragic death disclosed the fact that he was being financed through the University by the late Hon. James Elwood Jones. He had taken out a life insurance policy of $2,000 with Mr. Jones as beneficiary. In deference to the memory of Theodore Smith, Mr. Jones turned the $2,000 over to the University for the establishment of the Theodore Smith Fund.

The Revolving Emergency Fund for Men—A fund to meet emergencies of University men was established in October, 1931. The principal of this fund amounts to about $3,000. H. E. Stone, founder of the fund, is treasurer.

Loans are made in small amounts and for short periods of time. About 2500 loans have been made from this fund since it was established. In 15 years its loans have aggregated approximately $30,000.

The Baltimore and Ohio Railroad Fund—A special fund for small loans to students registered in the College of Agriculture has been established by the Baltimore and Ohio Railroad. The Secretary of Loan Funds acts as treasurer of this fund.

The Chauncey Watson Boucher Fund—This fund was established in 1936 by former President C. S. Boucher in memory of his father. Seniors from West Virginia may borrow only for the payment of University fees. Loans must be repaid within two years and are without interest.

The Charles E. Lawall Fund—Established in 1939 for small loans to worthy students in need of aid; available to students whose scholastic record has been satisfactory; interest payable only for periods in excess of time for which the loan is granted.

Alfred Walker Fund—a special fund for loans to Pharmacy students, established in 1938 by Dean J. Lester Hayman in honor of the memory of Mr. Alfred Walker of Sutton, first president of the West Virginia Pharmaceutical Association and, for many years, secretary of the State Pharmaceutical Association.

The John W. Davis fund, established for the making of loans to outstanding law students, aids worthy students each year.

The P. C. Thomas Fund—In May 1943 the P. C. Thomas loan fund was established in memory of the late P. C. Thomas of the Koppers Coal Company. The initial contribution made by employees of the Company was $520.

The Kellogg Foundation Fund—The Kellogg Foundation in 1942 allotted $5,000 to West Virginia University for loans to students in the School of Medicine. Loans from this fund may not exceed $150 during any academic year. The total loan to one student may not exceed $250. Interest is charged at the rate of 2 percent. Students may not borrow until after the successful compleion of one term in the School of Medicine.

The Leon Leonian Memorial Fund—Established in July 1945 in honor of the memory of Dr. Leon H. Leonian. Small loans are made to students for short periods without interest. More than 100 students have already been helped by this fund.

The Loyalty Permanent Endowment Loan Fund of the W. V. U. Alumni Association—This fund was established some years ago by contributions of alumni and other friends of the University. It is a permanent trust fund, the income of which is available to worthy students.

West Virginia State Conference of Social Work Fund—In 1940 the State Conference of Social Work established a student loan fund for the department of social work, such fund to be granted, without interest, to eligible full-time graduate social-work students who are residents of West Virginia.

Many off-campus loan funds cooperate with the Office of the Secretary of Loans and Placement. These include the funds of various Masonic and other fraternal bodies, social fraternities, civic clubs, church boards, religious associations, and other organizations. The Morgantown Rotary Club fund has also aided many men by small loans in emergencies. Information concerning these funds may be obtained from the Secretary of Loans and Placement.

PRIZES, TROPHIES, AND MEDALS

Prizes

Awards for prizes in the University are made in accordance with the following rules:

No composition, in whole or in part, shall be submitted in competition for two prizes.

Only students pursuing courses leading to baccalaureate degrees are eligible for any prize offered, except for the James F. Brown prize.

No student shall be eligible to enter any contest who has not been a resident student in this University for at least one semester preceding the semester in which the contest is to be held, and who, unless he be a competitor for the James F. Brown prize, is not a resident student in good standing in the University in the semester in which the contest is held.

No successful contestant may become for a second time a competitor for the same prize.

If in any contest the judges find no manuscript of sufficient merit, there shall be no award of the prize for that year.

Students intending to compete in any essay-writing contest must notify the chairman of the Committee on Prizes not later than March 15. Three typewritten copies of each essay must be in the hands of the chairman of the committee not later than May 15.

The conditions upon which the awards in the several contests are made may be learned upon application to the office of the Director of Student Affairs or to the members of the Committee on Prizes.

The Tax Commission Prize—The honorable members of the State Tax Commission of 1902, namely, W. P. Hubbard, Henry G. Davis, John K. Thompson, L. J. Williams, and J. H. Holt, gave the sum of $1,350, later increased by unawarded sums to $1,500, the income of which is to be used annually as a prize for the "best original work bearing on matters of taxation in West Virginia." The conditions of the competition are determined by the Council of Administration. The amount of the prize at present is $50. The subject assigned for 1948-49 is "Tax coordination with the Federal and other Governments."

The James F. Brown Prize—The Hon. James F. Brown, an alumnus of the University, "with a desire to stimulate the young men of the State to fuller consideration of the 'inalienable right' of mankind, and especially those guaranteed by the Constitution of the State and the United States," has contributed $5,000 to the University, the income of which is to be "used as a prize for the best essay or paper each year on the subject of the individual liberties of the citizen as guaranteed by the Constitution." The income may be given as a single prize, or it may be divided into a first and second prize. For the present the award will be made as a single prize, $200 in amount. Any regularly enrolled student in any school or college of the University or any student within one year after receiving an undergraduate degree may compete for this prize. Graduates of the College of Law or of the School of

Medicine or holders of any post-graduate degree are not eligible to compete for this prize. The subject assigned for 1948-49 is "The Fourteenth Amendment and the adequacy of state procedures for questioning the legality of imprisonment."

The West Virginia State Pharmaceutical Association Prize—The West Virginia State Pharmaceutical Association offers to the student making the best set of drawings in Pharmacy 10 a two-year, paid-up membership in the American Pharmaceutical Association.

The Waitman Barbe Memorial Prize—The English Club of West Virginia University offers an annual prize of $25 in memory of Waitman Barbe, poet, scholar, and adviser of the English Club during his long term of service on the faculty. The prize is awarded to some student regularly enrolled as a junior or senior in West Virginia University, for creative work in the field of literature, either in prose or poetry or both. The minimum length of such composition must be 4,000 words in prose or 100 lines in poetry.

The Board of Governors Military Essay Prize—The Board of Governors of West Virginia University each year offers a prize of $50 to the cadet in the Division of Military Science and Tactics "who shall write the best essay on preparation against war."

Chi Omega Sorority Prize—The Chi Omega sorority offers an annual $15 prize to the sociology major with the highest academic ranking. All work done at West Virginia University is taken into account and no student is eligible to compete for the prize unless his junior and senior years have been spent at West Virginia University. The prize is awarded at the annual June Commencement.

Phi Lambda Upsilon Fraternity Prize—Phi Lambda Upsilon, honorary chemical fraternity, offers annually the Alexander Reed Whitehill award to the student receiving the highest grade in chemistry during the freshman year. The award consists of an engraved ornament.

The R. A. West Prize for Engineering Students—R. A. West, an alumnus of the University, because of his interest in the College of Engineering and in the young men who have been and are students there and with the further idea of promoting sound scholarship, offers a prize of $50 to the member of the graduating class of the College of Engineering in June who has maintained the highest scholarship as measured by his honor-point average.

Tau Beta Pi, honorary Engineering fraternity, each year offers an engraved cup to the sophomore Engineer who during his freshman year maintained the highest average in his class.

The Nathan Burkan Memorial Prize—The American Society of Composers, Authors, and Publishers has established the Nathan Burkan Memorial Competition, open to the leading universities and colleges of the country that offer a course in law. A prize of $100 is available in each institution, to be awarded to the student in the graduating class in law who prepares the best paper on the subject of "Copyright Law."

Prizes in Public Speaking—In each of the four events (debate, oration, extempore speaking, and poetry reading) in the West Virginia Interscholastic Public Speaking Contest a gold medal is awarded to the winner of first place;

a silver medal to the winner of second place; and a bronze medal to all other speakers who participate in the semi-finals at the University. Each high school represented by a winner of first place is presented with a beautiful wall plaque with the escutcheon of the University mounted upon it.

The Intercollegiate Peace Association of America provides $100 in cash prizes to be awarded as follows: $50 for first prize; $30 for second prize; and $20 for third prize in the annual Intercollegiate Peace Oratorical Contest. This contest is held under the auspices of the Department of Speech of the University and each institution of higher learning in the state is entitled to send one representative.

The Sigma Xi Award—Sigma Xi, the national honorary scientific research society, annually gives an award to the senior student majoring in science who shows most promise in research. The award consists of election to associate membership in Sigma Xi, with the initiation fee and Associate's key donated by the West Virginia Chapter.

West Virginia Oil and Natural Gas Association prize for students in the School of Mines—In order to stimulate interest on the part of oil and natural gas engineering students in their profession, the West Virginia Oil and Natural Gas Association offers a prize of $25 each year to a member of the graduating class of the School of Mines. The student must be enrolled in the oil and natural gas option, and his scholarship must be the highest of that group as measured by his honor-point average.

West Virginia Coal Mining Institute prize for students in the School of Mines—In order to stimulate interest on the part of mining engineering students in their profession, the West Virginia Coal Mining Institute offers a prize of $25 each year to the members of the graduating class of the School of Mines. The student must be enrolled in the coal-mining option, and his scholarship must be the highest of that group as measured by his honor-point average.

The Margaret Ann Cuthbert Music Prize—An annual prize of $25 in memory of his mother has been established by Frank Cuthbert, Director of the School of Music. It is awarded to the outstanding senior graduating from the School of Music and chosen by the faculty of that school for high scholastic standing and professional promise.

The James Wimer Memorial Award—This award pays tuition for one year. The donor desires anonymity. The award is given to the senior making the highest average in his first three years in chemical engineering.

Trophies

Alpha Epsilon Delta Prize—The Alpha of West Virginia chapter of Alpha Epsilon Delta offers each year a silver cup to the freshman pre-medical student who has made the best scholastic record for the year in chemistry and zoology.

The Inter-Fraternity Scholarship Trophy—Professor Arleigh Lee Darby of the department of Romance languages and literature offers a silver cup known as the Inter-Fraternity Scholastic Trophy. It is awarded at the end of the University year to the fraternity having the highest average scholarship

standing for that year and is to remain in the possession of that fraternity during the following year. The cup becomes the permanent property of the fraternity that first wins it five times.

The George C. Baker Trophy—The Hon. George C. Baker, graduate of the College of Law, offers a silver loving cup, possession of which is awarded each year to the Club Court in the College of Law winning the inter-club competition.

The School of Physical Education and Athletics offers two trophies to the fraternities scoring the highest and second-highest number of points in the all-year athletic competition for fraternities.

Pan-Hellenic Association Scholarship Cups—The Pan-Hellenic Association offers two scholarship cups. Any sorority which is a member of the Women's Pan-Hellenic Council may compete for the cup, and it is awarded each year to the group having the highest average. The woman's fraternity which has maintained the highest average for three consecutive years is given permanent possession of the cup. The Pan-Hellenic Association also offers a cup each year to the pledge group which maintains the highest average.

Medals

The Lehn and Fink Medal—Through the generosity of Lehn and Fink, manufacturing chemists of New York City, the College of Pharmacy awards each year to the senior pharmacy student who, in the opinion of the Faculty of the College of Pharmacy, attains the highest scholarship a gold medal. The medal is appropriately engraved.

HONOR SOCIETIES

Phi Beta Kappa—The Alpha of West Virginia chapter of the Phi Beta Kappa Society is established at the University. Stated meetings or public exercises of the society are held twice annually; the anniversary meeting on December 5, and the annual meeting during Commencement Week. The honor of membership may be conferred upon candidates for the degree of Bachelor of Arts who have maintained a high scholarship rank during their college course; also, upon members of the faculty and alumni of the University, and upon distinguished citizens of the state.

Sigma Xi—The Society of the Sigma Xi is a national honorary society devoted to the advancement of research in pure and applied science. Membership may be conferred upon faculty members and students who show outstanding ability in some field of scientific research.

Tau Beta Pi—The West Virginia Alpha chapter of the national engineering honor association of Tau Beta Pi was established in the College of Engineering in 1922. Students who rank in scholarship among the upper one-eighth of their class are eligible to election in their third year and all who rank among the upper one-fourth of the class are likewise eligible in their fourth year. These together with alumni and honorary members constitute the chapter.

Alpha Zeta—The West Virginia chapter of Alpha Zeta, the national agricultural honor fraternity, was instituted in the College of Agriculture in

1921. Sophomores and upperclassmen who maintain high standing in scholarship and rank among the upper two-fifths of their respective classes are eligible to membership.

Phi Upsilon Omicron—The Lambda chapter of Phi Upsilon Omicron, one of the national professional organizations in home economics, was established at the University in November, 1923. Its purpose is to promote the moral and intellectual development of its members, to help develop leadership, and to advance home economics. Membership is open to juniors and seniors in home economics who rank in the upper two-fifths of the class in scholarship and who meet certain personality standards.

Phi Lambda Upsilon—The Tau chapter of Phi Lambda Upsilon, national chemical honor fraternity, was established at the University in 1924. The chief object of the society is the promotion and protection of high scholarship and original investigation in all branches of pure and applied chemistry. Seniors and juniors who have attained a high standard of scholarship and character are eligible for membership.

Sigma Gamma Epsilon—Upsilon chapter was established at West Virginia University in 1927. The fraternity has for its objects the social, scholastic and scientific advancement of its members, the extension of the relations of friendship and assistance between the universities and scientific schools with recognized standing in the United States and Canada, and the upbuilding of a national college society devoted to the advancement of geology, mining, metallurgy, and ceramics. Seniors and juniors in the courses indicated, who have attained high scholarship rank, are eligible for membership.

Order of the Coif—A chapter of the Order of the Coif, a national law school honor society, was installed in 1925. Its members are selected by the Law faculty from the 10 percent of the senior class in the College of Law ranking highest in scholarship.

Phi Epsilon Phi—Phi Epsilon Phi, botanical honor fraternity, was founded at West Virginia University in 1929. The fraternity has for its purpose the promotion of high scholarship, the inciting of interest in botanical research, and the encouragement of professional ideals. Seniors and graduate students who are engaged in botanical work and who have attained a high standard of scholarship and character are eligible for membership in the organization.

Kappa Tau Alpha—National journalistic honor society with special emphasis on high scholarship and the best professional ideals. There are chapters in 22 universities. The West Virginia chapter was established in 1930.

Sigma Pi Sigma—Theta chapter of Sigma Pi Sigma, national physics honor society, was installed in the University in 1929. The formal statement of the objects of the society is: "To reward high scholarship and promote interest in the advanced study of physics, to stimulate individual research, and to enable its members to keep pace with the progress of science." A student elected to membership must be taking some course in physics at the time of his election. Graduate students who are taking advanced work in physics and related subjects are eligible for membership.

Kappa Delta Pi—Kappa Delta Pi, national honorary educational society, installed Alpha Upsilon chapter at West Virginia University, July 21, 1927.

Election to this fraternity is conditional upon high scholarship and desirable personal and professional qualities.

Alpha Epsilon Delta—The Alpha of West Virginia chapter of Alpha Epsilon Delta was established at West Virginia University in 1930. The chief object of the society is the promotion of high scholarship among pre-medical students. Juniors and seniors of high scholarship and character are eligible for membership.

Pi Tau Sigma—The West Virginia Pi Gamma chapter of Pi Tau Sigma was installed at West Virginia University on March 31, 1942. This is an honorary mechanical engineering fraternity with chapters in 35 universities. Seniors and juniors in mechanical engineering who have attained high scholarship rank are eligible for membership.

Eta Kappa Nu—Eta Kappa Nu, an electrical engineering honorary society installed at West Virginia University in 1946, is open to students in the upper fourth of the junior class and in the upper third of the senior class.

Scabbard and Blade—C Company, Second Regiment, West Virginia University, the National Society of Scabbard and Blade, was installed on May 21, 1916. The society believes that military service is an obligation of citizenship and that the greater opportunities afforded college men for the study of military science place upon them certain responsibilities as citizens. The purpose is to create and unite in closer relationship the military departments of American universities and colleges; to preserve and develop the essential qualities of good, efficient officers; to prepare themselves as educated men to take a more active part and to have a greater influence in the military affairs of the communities in which they may reside; and above all to spread intelligent information concerning the military requirements of our country. The society, inactive during the war, was reactivated on the Univesity campus during the school year 1946-47. Advanced Course ROTC students who maintain high standing in scholarship, leadership, character, and efficiency are eligible for membership.

OTHER UNIVERSITY ORGANIZATIONS

There are in the University various fraternities, sororities, societies, and clubs devoted chiefly to the social, educational, and athletic interests of the students. Some of the more important of these organizations are:

National and Greek Letter Societies

SOCIAL FRATERNITIES

Men

Beta Theta Pi
Delta Tau Delta
Kappa Alpha
Kappa Sigma
Phi Delta Theta
Phi Kappa Psi
Phi Kappa Sigma
Phi Kappa Tau
Phi Sigma Delta
Phi Sigma Kappa
Pi Kappa Alpha
Pi Lambda Phi
Sigma Chi
Sigma Nu
Sigma Phi Epsilon
Tau Kappa Epsilon
Council of Fraternity Presidents

Women

Alpha Delta Pi
Alpha Phi
Alpha Xi Delta
Chi Omega
Delta Gamma
Kappa Kappa Gamma
Pi Beta Phi
Sigma Delta Tau
Pan-Hellenic Association

PROFESSIONAL FRATERNITIES

Men and Women

Alpha Kappa Psi (Economics)
Alpha Psi Omega (Dramatic)
Delta Phi Alpha (German)
Delta Sigma Rho (Forensic)
Eta Sigma Phi (Latin)
Phi Delta Phi (Law)
Phi Alpha Delta (Law)
Phi Beta Pi (Medical)
Phi Chi (Medical)

National and Local Organizations

Agricultural Club
Art Club
Associated Women Students
Athletic Managers Club
Cadet Hop Association
Camera Club
Christian Youth Council
Circolo Italiano (Italian)
Dames Club
Der deutsche Verein (German)
Dolphin Club (Physical Education)
English Club
Fi Batar Cappar
F. F. A. Club (Collegiate)
Forestry Club
Forum
Future Teachers of America
Home Economics Club
International Relations Club
Journaliers (Men, Journalist)
La Tertulia (Spanish)
Le Foyer Francais (French)
Li-Toon-Awa (Sophomore women)
McDowell Club
Matrix (Women, Journalistic)
Men's Glee Club
Mortar Board (Senior Women)
Mountain (Men)
Outing Club
Orchesis (Women, Physical Education)
Parkersburg Club
Phi Mu Alpha Sinfonia
Philological Society
Physical Education Club
Pre-Law Fraternity
Press Club (Journalism majors)
University Religious Council
Public Affairs Club
Rhododendron (Junior women)
Rowan Rifles (Military)
Scabbard and Blade (Military)
Sociology and Social Work Club
Speech Club
Sphinx (Senior men)
"Spiked Shoe" (Track and field)
Student Forum
University Band
University 4-H Club
University and Community Chorus
University and Community Orchestra
University Scientific Society
Varsity Club
Veterans' Association of World War II
Woman's Hall
  North Wing
  South Wing
Women's Recreation Association
Women's Glee Club
Women's Pan-Hellenic Association (Intersorority)
Student branches of the following:
  Amer. Inst. of Chemical Engineers
  Amer. Society of Civil Engineers
  Amer. Inst. of Electrical Engineers
  Amer. Society of Mechanical Engineers
  Amer. Inst. of Mining and Metallurgical Engineers
  Society of American Military Engineers
  Society of Professional Engineers
Xi Gamma Iota (ex-G. I. women)

Faculty Organizations

American Association of University Professors—The West Virginia University chapter of the American Association of University Professors now has a membership of approximately 60. The present officers are: A. S. Abel, president; Ruth D. Noer, vice-president; F. F. Carhart, Jr., secretary-treasurer.

Faculty Club—The Faculty Club of the University, organized on March 10, 1921, is composed of the teaching, research, and extension staffs of the institution. The club rents a house at the corner of Pleasants and Spruce Streets which serves as a club house and residence. Meals are served to members and their guests. The clubrooms provide a center for social activities of members of the Faculty.

Campus Club—The Campus Club is a social organization made up of women on the University staff as well as the wives of men on the staff. The club holds meetings twice each month and special meetings and functions at other times.

Cornell Club of Morgantown—The Cornell Club of Morgantown is an alumni social organization founded in 1925. Membership is open to graduates and former students of Cornell University who live in this region and to their husbands and wives. The club holds an annual meeting and dinner and other occasional meetings at which speakers from Cornell are heard. The officers are: president, F. D. Cornell, Jr.; secretary, W. H. Childs; treasurer, D. W. Parsons.

West Virginia Alumni Association of Johns Hopkins—The West Virginia Alumni Association of Johns Hopkins, founded in 1913, holds annual meetings on February 22, the anniversary of the establishment of Johns Hopkins University. Graduates and former students of Johns Hopkins are eligible for membership. Dr. Dorsey Brannan is president; O. D. Lambert, vice-president; and C. E. Weakley, Jr., secretary.

Wisconsin Alumni Club—Graduates and former students of the University of Wisconsin are eligible to membership in this organization, which holds social meetings at which speakers from that university are heard. Edw. H. Tyner is the present president of the club, organized in 1937.

PUBLICATIONS

University Publications

The following publications are issued regularly at the University:

1. The **West Virginia University Bulletin**, issued monthly during the year. The series includes the Catalogue of the University and the Announcements of the various colleges and schools as well as other occasional publications.

2. The bulletins and circulars of the Agricultural Experiment Station.

3. The circulars of the Agricultural Extension Division, including the **Farm Women's Club** leaflets, the **4-H Suggestions**, the **Treasures of the Trail**, the **West Virginia Farm News** (in cooperation with the West Virginia Farm Bureau), and special pamphlets.

4. Agricultural News Service bulletins published weekly by the College of Agriculture.

5. The bulletins of the Engineering Experiment Station and of the School of Mines.

6. The **West Virginia Law Quarterly**, the official publication of the West Virginia Bar Association, edited by the faculty of the College of Law.

7. Miscellaneous publications under the title of **Philological Studies** or **Biological Studies.**

8. The **Student Directory**, the annual directory of the student body, published by the University Book Store.

9. The annual **Proceedings** of the West Virginia Academy of Science.

10. The West Virginia **Fourth Estatesman**, a quarterly publication edited by the faculty of the School of Journalism.

Student Publications

The Daily Athenaeum, University student newspaper, is published daily Tuesday through Saturday, by students of the School of Journalism. Heads of the editorial and business staffs are elected by the student body from candidates certified by the School of Journalism faculty and approved by the Committee on Student Publications.

The Monticola, student yearbook of the University, is usually published by upperclassmen. The editorial and managerial staff is elected by the student body.

The Moonshine, student humorous magazine, is published by a staff chosen from the student body.

The Freshman Handbook is published annually and is distributed to each member of the entering class.

The Cruiser, a student forestry yearbook, is published by the West Virginia University Forestry Club. The managing editor is appointed by the executive board of the club.

All student publications are under the supervision of the Committee on Student Publications.

ASSOCIATED INSTITUTIONS

The West Virginia Academy of Science

Organized in 1924 to bring about closer affiliation among the scientists of the state and to encourage the pursuit of scientific work throughout the commonwealth, the West Virginia Academy of Science is a body of nearly 300 men and women who are interested in the service of science in the development of the state. The members are widely distributed throughout the state and are representative of colleges, high schools, and industries. Annual meetings, held at the various institutions of higher learning, are divided into sections on biology, chemistry, geology and mining, mathematics and physics, and social sciences. The Proceedings of the annual meetings are published under the auspices of the University and of the Academy.

The West Virginia Geological and Economic Survey

The West Virginia Geological and Economic Survey, situated at West Virginia University, is governed by its own commission and receives separate appropriations.

The Geological Survey was founded by an Act of the Legislature in 1897 and has functioned consistently since that date. It is recognized as one of the leading state surveys.

One of the major purposes of the Survey is to have members of its staff, specialists in their field, investigate all the natural resources, and especially the mineral resources, of the state and to make the results of the investigations available to the public in the form of written reports and maps.

Accomplishments of the Survey include the complete topographic map ping of the state on 1-mile-to-the-inch quadrangles; the complete geologic mapping of the state by counties, and a state geologic map; the complete map-

ping of the soils of the state by counties; and the state relief map (scale 1 inch equals 4 miles).

Numerous special reports also have been made on coal, oil, gas, clays, limestones and cement, iron ores and building stone, mineral springs, manganese, deep-well records, salt brines, rock salt, and forest and wood industries.

The professional staff of the Survey is composed of four geologists, four chemists, and a spectroscopist. Some of the staff members of the Survey serve as part-time teachers in the department of geology of the University, and there is close cooperation between the department and the Survey. Several members of the staff who served in the Army and Navy on leave of absence have now returned to their former positions.

Government of the Survey is vested in the Geological Survey Commission, composed of the Governor of West Virginia, the State Treasurer, the Commissioner of Agriculture, the President of West Virginia University, and the Director of the Agricultural Experiment Station.

The West Virginia Biological Survey

The West Virginia Biological Survey is an organization of voluntary workers whose purpose is the collection of information of every kind about the plants and animals of the state.

The executive committee consists of a biologist from each of the colleges of the state with a chairman, secretary, and curator. There are no dues, and membership is open to all persons interested in the work of the Survey.

The repository for the plant and animal collections is in Science Hall, West Virginia University, Morgantown, and Marshall College, Huntington. Under the direction of the Survey a series of bibliographies dealing with the biology of the state is being published.

The Survey, in cooperation with the Carnegie Museum, Pittsburgh, Pennsylvania, during several summers has maintained one or more field collectors whose work has taken them into all parts of West Virginia. An increase in knowledge of biological conditions in the state has resulted from this work.

The State Road Commission

The Materials Laboratory of the State Road Commission is housed in Mechanical Hall of the University. Its work includes the testing of all materials used by the Commission and also research on problems of road construction and maintenance in West Virginia.

Part III

Curricular Requirements and Courses of Instruction in the Colleges, Schools, and Divisions

ABBREVIATIONS FOR PART III

The following abbreviations are used in the announcements of courses:

I—A course given in the first semester.

II—A course given in the second semester.

S—A course offered in the Summer Session.

I, II—A semester course given in each semester.

I and II—A course given throughout the year.

NOTE: Beginning with the year 1948, summer courses carry the same credit values as courses offered in the regular semesters. The small letter "s" attached to a course number, formerly denoting a difference in credit value, no longer applies to any course.

Hrs.—Number of credit hours per course.

conc—concurrent registration required.

consent—consent of instructor

PR—prerequisite.

†—Course omitted, 1948-49.

THE PLAN FOR NUMBERING COURSES

For convenience each course of study is designated by the name of the department in which it is given and by the number of that course. The plan of numbering is as follows:

Courses 1 to 99—courses intended primarily for freshmen and sophomores.

Courses 100 to 199—courses intended primarily for juniors and seniors.

Courses 200 to 299—advanced courses open to juniors, seniors, and graduate students.

Courses 300 to 399—courses open to graduate students only.

SCHEDULES

Before the opening of each semester, a schedule is printed announcing the courses to be offered in that semester in the College of Arts and Sciences, the College of Education, the School of Music, the School of Physical Education and Athletics, the School of Journalism, and the Division of Home Economics in the College of Agriculture, Forestry, and Home Economics. Schedules are prepared for the College of Agriculture, the College of Engineering, the College of Law, the College of Pharmacy, and the School of Medicine but are not printed. A complete schedule of all courses offered in the Summer Session is printed in the Summer Session Bulletin.

The College of Agriculture, Forestry, and Home Economics

ORGANIZATION

All the agricultural, forestry, and home economics work of the University is organized under the College of Agriculture, Forestry, and Home Economics. For the purpose of administration the College is divided into three branches: viz.,

I. The Agricultural Experiment Station, organized for research and experimental work.

II. Resident instruction in agriculture, in forestry, and in home economics.

III. Extension work in agriculture, forestry, home economics, and boys' and girls' club work, given by the Division of Agricultural Extension to citizens of the state who are not in residence at the College.

The work of these divisions is closely interrelated. Although some members of the staff devote full time to college instruction, research, or extension work, many others divide their time among two or three of these divisions.

The Standing Committees

STUDENTS' COURSES AND HOURS: MESSRS. ORTON, PEAIRS, HILL, and PERCIVAL; MISS NOER.

SCHOLARSHIPS: MESSRS. BESLEY and POHLMAN; MISS DIETRICH.

STUDENT PLACEMENT AND FARM PRACTICE: MESSRS. POHLMAN, LIVESAY, PARSONS, MARSH, SUDDS, and HYATT.

LIBRARY: [4]MESSRS. CARTLEDGE, DUSTMAN, SUDDS, ARMENTROUT, MARRA, and LEACH; MISS PALMER.

STATION STAFF COMMITTEES

STATION PROJECTS: MESSRS. ARMENTROUT, BARNETT, and GALPIN.

STATION PUBLICATIONS: MESSRS. TAYLOR, PEAIRS, and CLARKE.

STAFF CONFERENCES: MESSRS. HYATT, TRYON, and H. A. WILSON.

The Agricultural Experiment Station

The Agricultural Experiment Station was established in the University by the Board of Regents in 1888 by authority of an act of Congress known as the Hatch Act. Further support was given by acts of Congress known as the Adams Act, approved June 30, 1906, the Purnell Act, approved February 24, 1925, the Bankhead-Jones Act, approved June 29, 1935, and the Research and Marketing Act, approved August 14, 1946. The work of the Station is supported also by state appropriations.

[4]Joint Committee of the College and Experiment Station.

Investigations are being conducted in the fields of animal husbandry, animal pathology, dairy husbandry, poultry husbandry, field crops, horticulture, entomology, plant pathology, agricultural biochemistry, soils, land use, water problems, farm economics, farm mechanics, forestry, physiology, nutrition, hillculture, bacteriology, and mycology, classified into about 100 research projects.

In addition to the five farms situated at Morgantown, described elsewhere in this Catalogue,[1] branches of the Agricultural Experiment Station are maintained at Wardensville, Hardy County; Point Pleasant, Mason County; Kearneysville, Jefferson County; and Reedsville, Preston County. Experimental work is also being carried on elsewhere throughout the state.

Agricultural Extension

By act of the Legislature of 1913, amended in 1915, "in order to promote the improvement and advancement of agriculture, domestic science, and rural life among the people of the several counties of the state," there was "created and established in the College of Agriculture an Agricultural Extension Division to be coordinate with the resident instruction division and the Agricultural Experiment Station" of the College. This service is financed and administered with the cooperation of federal, state, and county governments.

The work originally undertaken has been expanded to include the 4-H Club Camp for boys and girls, established at Jackson's Mill in 1921 for the purpose of teaching standards of excellence in agriculture and home economics, and the recreation center, established at Oglebay Park (Wheeling) in 1926, which has undertaken the task of developing adequate programs for improving the use of leisure time of both rural and urban citizens and for the training of community leaders.

Short Courses and Special Schools

In addition to the instruction of collegiate grade offered, the College of Agriculture maintains a series of annual short courses and special schools for the benefit of adult residents in the state who wish to obtain, in brief periods, education in certain fields. This series includes the Dairy and Ice Cream Short Course, the Horticulture Extension School, Farm and Home Week, Junior Farmer's Week, and the Junior Homemakers' Conference.

THE DIVISION OF AGRICULTURE

The training offered in agriculture is directed to fit the student for farm life or professional and business fields. Graduates may engage in farming as managers or as farm owners, in the teaching of agriculture in high schools or colleges, in extension work as county agents or specialists, in research work in experiment stations or other organizations, or in many of the federal activities in aid of agriculture. They may engage in business related to farming, such as dairy manufacturers, meat processing, seeds and nursery stock, feeds and fertilizers, or marketing.

[1]See page 35.

The curriculum leading to the degree of Bachelor of Science in Agriculture is designed to provide a broad and well-grounded training in the general field of agriculture so that the graduate may be prepared for occupations requiring such general knowledge, and may have the necessary foundation for such specialization as he may elect to pursue.

All candidates for the degree will follow a uniform curriculum for the first two years, which includes courses in the sciences that are fundamental to agriculture, together with certain specified courses in agriculture. During the third and fourth years a certain amount of selection is permitted which will enable the student to meet special requirements in various fields, such as animal industry, plant industry, dairy manufacturers, and agricultural education. In the last-mentioned field he may qualify for the teacher's certificate in Vocational Agriculture. Or the student may make the elective work broader in its scope and prepare for some phase of extension activity or for general farming; or he may choose the Agricultural Science curriculum, which will serve as a foundation for later graduate work in some scientific phase of agriculture.

For the use of the students the following laboratories are maintained in the college: agricultural chemistry, agronomy, soils, genetics, animal husbandry, animal pathology, dairy husbandry, entomology, farm economics, farm shop work, horticulture, nutrition, plant pathology, and poultry husbandry.

The Curriculum in Agricultural Science

Students who expect to do graduate work in preparation for teaching agricultural science in colleges and universities or for research work in experiment stations, or for other work in specialized fields of basic agicultural science, should register for the Curriculum in Agricultural Science. Only those students who have a high-school record above the average and who are capable of maintaining a scholarship average of B or above should follow this curriculum. Success in graduate work will depend upon better-than-average undergraduate scholarship, and such undergraduate work must include adequate preparation in biology, mathematics, English, and foreign languages. The degree of Bachelor of Science is conferred upon the satisfactory completion of this curriculum.

The Combined Degree: A. B., and B. S. in Agriculture

Students who desire a broader training than that furnished in the curriculum leading to the degree of Bachelor of Science in Agriculture are reminded that, by proper arrangement of their courses, they may obtain both degees in five years. Such students normally will take first the degree of Bachelor of Arts in the College of Arts and Sciences, usually with major work in the field of biology. For particulars, see the Announcements of the College of Arts and Sciences.

The Two-year Curriculum Leading to the Certificate in Agriculture

Students who may wish to acquire technical training in the field of scientific agriculture, but who do not care to meet all the requirements for the degree of Bachelor of Science in Agriculture, may register for the two-year curriculum leading to the Certificate in Agriculture. Requirements for entrance are the same as for the four-year course, namely, a high-school diploma. The first year's work is designed to give the student basic studies in some of the principal fields of Agriculture. The second year's work is more flexible, allowing the student to specialize in some field of Agriculture if he so desires.

Seventy hours of work are required, this work to include 6 hours of English, 2 hours of physical education, and 6 hours of military science (if not exempted). At least 45 hours of credit must be taken in the College of Agriculture. Students in this curricculum can complete this course without regard to honor points; however, no credit can be transferred to the four-year course unless the grade in each course is C or above.

Graduate Work

Graduate work leading to the Master of Science degree is offered in all branches of agriculture and in home economics education. In certain branches also, courses leading to the degree of Doctor of Philosophy are offered. The student who plans to pursue graduate work is directed to the Graduate School announcements in the University Catalogue. Advancement in any of the professional fields is dependent on graduate study, and the student desiring to pursue such work should plan to continue in graduate study upon completion of the undergraduate curriculum. A limited number of graduate assistantships which permit half-time devotion to study are available in the Division of Agriculture and in the Experiment Station.

Teachers of vocational agriculture may combine graduate work in Agriculture and Education by taking 16 to 20 hours in Agriculture and 10 to 14 hours in Education to fulfill the requirements for the M. S. degree.

REQUIREMENTS FOR THE DEGREE

Credits Required

The degree of Bachelor of Science in Agriculture may be conferred upon any student who satisfies the entrance requirements and offers 144 hours' approved credit for college courses, including all requirements set forth below.

The "semester hour" is the standard for computing the amount of work required for graduation. The "hour" represents the amount of work done in one semester (18 weeks) in one recitation with two preparation hours a week, or three hours' practice or laboratory work requiring no outside preparation.

No student is permitted to register for less than 14 hours or more than 20 hours of work in any one semester without special permission.

Required and Elective Subjects

All the couses for the first two years, and most of the courses for the third year, are definitely required for all students (except majors in vocational agriculture and in dairy manufactures). These courses are shown in the Basic Curriculum. Students who are not required to take military science must substitute elective credits. Agriculture 5, required of students deficient in farm practice, must be completed before the third year. First-year English (English 1 and 2 or their equivalent) must be completed before any upper-division courses may be pursued for credit towards the degree.

The fourth-year college student who wishes a general education in the field of Agriculture, leading toward the Bachelor's degree, is directed to the General Curriculum in Agriculture. This course is broad enough to prepare the student to serve as a county agent or in related extension work.

For those who desire more specialized training, five courses are open—animal industry, plant industry, dairy manufactures, vocational agriculture, and conservation. The vocational-agriculture course is the only curriculum which qualifies a student to obtain a teacher's certificate.

After requirements have been met, electives may be chosen, without restriction as to college or department, with the approval of the adviser or of the Committee on Courses and Hours. However, the required and elective hours taken in the College of Agriculture must total at least 60 hours. Provision is made for upper-division students who may wish to elect certain lower-division subjects such as languages.

Students who expect to pursue graduate work in Agriculture are advised to matriculate in the Agricultural Science curriculum for their undergraduate courses. This curriculum requires that a minimum of 45 hours, representing at least 5 subject-matter divisions, be taken in the College of Agriculture.

The Dean of the College of Agriculture will act as adviser for all agriculture students and will assign students to other advisers whom he may designate.

Electives

Elective work to make up the total required for graduation may be chosen from courses in the College of Agriculture or in other colleges of the University with the consent of the adviser or of the Committee on Courses and Hours. Ordinarily, little restriction is placed on the choice of such electives.

Students who offer credit from other institutions shall have their offerings evaluated by the Committee on Courses and Hours, which shall have discretionary powers in the acceptance or refusal of credit to count toward graduation from the College of Agriculture.

THE BASIC CURRICULUM

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 1	4	Chemistry 2	4
Biology 1	4	Botany 5	4
Agriculture 1	2	Agr. Eng'g 2	2
Phys. educ[1]	1	Poultry 1	4
Mil. Sci. 1	1	Phys. educ.[1]	1
		Mil. Sci. 2	1
	*15		19

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 31[2]	4	D'y. Husb. 12	3
Bact. 41	4	Horticulture 1	4
Agronomy 1	4	Agronomy 2	3
Mil. Sci. 3	2	Zoology 3	4
Geology 1	3	Mil. Sci. 4	2
An. Husb. 11	3	Elective	2
	20		18

THIRD YEAR[3]

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Hort. 102	4	Agr. Econ. 102	3
An. Husb. 101	3	Physics 2 & 4	4
Economics 1		Electives	4
(or)		An. Path. 102	3
Ag. Econ. 101	3	Entomol. 102	4
Physics 1 & 3	4		
D'y. Husb. 111	3		
	17		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Pl. Path. 103	3	Agr. 271	2
Electives	16	Electives	16
	19		18

NOTE

Before registering for his junior year, the student should decide upon the field of his major interest and must consult with the head of the department concerned with respect to choice and sequence of electives.

The following specialized courses of study are designed to meet the needs of students interested in certain phases of the profession:

In the general field of **AGRICULTURE**, required courses include Agricultural Economics 104 (3 hrs.) and Forestry 180 (2 hrs.).

In the fields of **ANIMAL, DAIRY,** and **POULTRY HUSBANDRY,** required courses include Animal Husbandry 203 (3 hrs.) and Genetics 111 or 221 (2 or 3 hrs.).

In the fields of **AGRONOMY** and **HORTICULTURE,** required courses include Genetics 221, Agronomy 210, and Agricultural Economics 104 (3 hrs. each), Botany 221 (4 hrs.), and Forestry 180 (2 hrs.). Required also for **Agronomy** students are Mathematics 3 (4 hrs.), Mathematics 4 (2 hrs.), and Agronomy 200 (3 hrs.). Required also for **Horticulture** students are Horticulture 206, 212 or 232, 213, and 209 or 233 (3 hrs. each).

[1]Only 2 hours in the service program accepted toward graduation.
[2]Chemistry 136 (6 hrs.) or 233 (5 hrs.) may be substituted.
[3]In addition to the courses listed above, 2 hours in farm practice must be earned by students with insufficient farm experience. This requirement must be met before the beginning of the junior year (See Agriculture 5).
*Freshmen who give evidence of high scholastic ability may be allowed to take an additional course.

THE CURRICULUM FOR STUDENTS OF DAIRY MANUFACTURES

(following the Basic Curriculum)

The curriculum given below is suggestive as regards subjects and may be varied by the class adviser to meet the needs of individual students, but the curriculum indicates the subjects which are usually advised for students who desire to take major work in dairy manufacturing.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
D'y Husb. 111	3	Agr. Econ. 102	3
D'y Husb. 218*	3	Physics 2 & 4	4
D'y Husb. 107	3	D'y Husb. 102*	3
D'y Husb 103†	3	*(or)*	
Agr. Econ. 101	3	D'y Husb. 104†	3
Physics 1 & 3	4	Agr. Econ. 160*	2
		(or)	
		D'y Husb. 246*	3
		Electives 5 or	6
	19		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
D'y Husb. 218*	3	D'y Husb. 104†	3
Agr. Econ. 235	2	*(or)*	
Hort. 102	5	D'y Husb. 102*	3
Agr. Econ. 131	3	D'y Hus. 204	4
Electives	5	D'y Husb. 222	4
		D'y Husb. 246*	3
		(or)	
		Agr. Econ. 160*	2
		Electives 4 or	5
	18		18

THE CURRICULUM FOR TEACHERS OF VOCATIONAL AGRICULTURE[4]

The State Board of Education has set up definite requirements applicable to all college graduates desiring to teach in West Virginia high schools. These requirements specify the kind and number of various sciences and agricultural courses as well as courses in professional education subjects, all of which are necessary to qualify graduates for certification. The following curriculum, which embodies such courses required for certification, is designed to prepare the qualifying student for a teaching career in the specialized field of vocational agriculture, with provision for teaching biology as a second subject. It also satisfies the requirements for the B. S. Agr. degree.

To meet state requirements for teaching vocational agriculture a total of 50 hours in Agriculture is required as provided in the following curriculum.

The complete statement of the requirements for certification to teach subjects related to agriculture will be found in the announcements of the College of Education.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
An. Husb. 101	3	Agr. Econ. 102	3
Hort. 102	4	Agr. Eng'g 153	3
Econ. 1		English	3
(or)		Hist., political	
Agr. Econ. 101	3	sci., or geog.	3
Agr. Eng'g 152	3	Educ. 109	2
Educ. 106	3	Entomology 102	4
Dairy 111	3		
	18		18

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Plant or animal		Educ.	2
pathology	3	Educ. 214	2
Social science	3	Educ. 120	2
Education 160	3	Educ. 224	4
Agr. Econ. 104	3	Speech 11	3
Phys. Ed. 180	2	Agr. 271	2
Electives	2	Rural Org. 118	2
Educ.	2		
	18		17

*Offered in alternate years.

†Offered in alternate years; not available in 1948-49.

[4]For a list of subjects required to teach non-vocational agriculture, see the bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

THE CURRICULUM IN AGRICULTURAL MECHANICS

This curriculum is intended for teachers of vocational agriculture who choose agricultural mechanics as a teaching field. If the fifth year is taken, the student can obtain his Master's degree in some agricultural field. Otherwise, eight hours must be taken in the summer to complete the teaching requirements. This curriculum fulfills the requirements to teach industrial arts or general shop in the high school.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Hort. 102	4	Agr. Econ. 102	3
An. Husb. 101	3	Mech. Eng'g 20	3
Agr. Econ. 101	3	Speech 11	3
Education 106	3	Math. 2	3
English	3	Education 109	2
Health Ed. 180	2	Agri. Eng'g 153	3
		Social Science	3
	18		20

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Plant or animal pathology	3	Math. 10	3
Agr. Econ. 104	3	Educ. 160	3
Social Science	3	Education 120	2
Agr. Eng'g 170	3	Educ. 214	2
Educ	2	Educ. 224	4
Mech. Eng'g 24	2	Mech. Eng'g 12	1
Mech. Eng'g 11	2	Mech. Eng'g 15	2
		Agriculture 271	1
	18		18

FIFTH YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Agricultural Engineering 252	3	Agricultural Engineering 253	3
Electives	12	Education 294	2
		Electives	10
	15		15

THE CURRICULUM IN CONSERVATION

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Biology 1	4	Agr. Eng'g 1	3
Chemistry 1	4	Botany 5	4
English 1	3	Chemistry 2	4
Mathematics 2	3	English 2	3
Mil. Sci. 1	1	Mathematics 10	3
Phys. Ed. 1	1	Mil. Sci. 2	1
Agriculture 1	--	Phys. Ed. 2	1
		Conservation 2	0
	16		19

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Agronomy 1	4	Botany 30	4
Chemistry 31	4	Entomology 2	4
Civil Eng'g 5	4	Physics 2 & 4	4
Physics 1 & 3	4	Zoology 3	4
Mil. Sci. 3	2	Mil. Sci. 4	2
	18		18

Summer Session Following Sophomore Year

Conservation 101 (Conservation of Renewable Resources) ---------- 2 Hrs.
To be given at State 4-H Camp, Jackson's Mill, during the first two weeks of the second summer term.

Agricultural Engineering 151 (Mechanics of Soil and Water Conservation) ---------- 4 Hrs
To be given on Campus after Conservation 101

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Agr. Econ. 101	3	Agron. 102	3
Botany 131	4	An. Husb. 104	4
Geol. 1 & 2	4	Conserv. 150	3
Hort. 103	3	Forestry 180	2
Pl. Path. 103	3	Forestry 181	2
		Elective	3
	17		17

FOURTH YEAR

First Sem.	*Hrs*	*Second Sem.*	*Hrs.*
Agr. Econ. 104	3	Agron. 220	2
Agron. 205	2	Climatology	3
Agrn. 215	3	Forestry 182	2
An. Husb. 101	3	Forestry 183	3
Botany 121	2	Elective	8
Elective	5		
	18		18

Summer Employment in Conservation Agency

Recommended Electives: Agronomy 200, 210; Bacteriology 141, 314; Genetics 220, 221; Animal Husbandry 222; Agricultural Economics 102, 131; Entomology 103.

THE BASIC CURRICULUM IN AGRICULTURAL SCIENCE

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 1	4	Chemistry 2	4
Biology 1	4	Botany 5	4
Agriculture 1	2	Math. 3 or 4	3
Math. 2 or 3	3 or 4	Mil. Sci. 2	1
Mil. Sci. 1	1	Phys. educ.	1
Phys. educ.	1		
	19		17

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chem. 31	4	Quantitative Chem.	3
Bact. 41	4	Zoology 3	4
Math. 4 (if not taken earlier)	3	Speech 11	3
Agr. Econ. 101	3	Geology 1	3
English 13	2	Mil. Sci. 4	4
Mil. Sci. 3	2	Electives	4
Chem. 5	4		
	19		19

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Physics 1 & 3	4	Physics 3 & 4	4
*German, French, or Spanish	3	*German, French, or Spanish	3
Electives	11 to 13	Electives	11 to 13
	18 to 20		18 to 20

FOURTH YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Electives	18	Electives	18

COURSES OF INSTRUCTION IN AGRICULTURE

Agriculture

DEAN ORTON and STAFF in AGRICULTUURE

Undergraduate Division

1. **Introduction to Agriculture.** I. 2 Hrs. A survey of the history and practice of the general field of agriculture with special reference to opportunities and problems in West Virginia.
Mr. Parsons, Mr. Hill, and Staff in Agriculture

*Take in Junior or Senior year.

NOTE:

Students must take 45 hours in the College of Agriculture in at least five subject-matter divisions.

A student may vary from the above curriculum with the approval of his adviser and of the Committee on Courses and Hours.

The student's adviser should be in the field of the student's major.

5. **Summer Practice.** No Hrs. A minimum of 12 weeks on an approved farm will be required of each candidate for the degree of Bachelor of Science in Agriculture who has not had the equivalent of at least one year's farm experience after reaching the age of 14 years. Must be done under the direction of the Dean and the Committee on Farm Practice and must be completed before the third year. Open only to students deficient in farm practice.

271. **Agricultural Problems and Organizations in West Virginia.** II 2 Hrs. Agricultural, topographical, and economic problems Function of farm programs of numerous agencies. Open for senior and graduate students in social work, home economics, and agriculture.
Staff members of Agriculture and Federal Agencies

280, 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Special work may be provided in each of the departments for students having the needed qualifications The consent of the respective department head is required. Departmental Staffs

Graduate Division

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. (See description under this number in each department.) Work for the degree of Master of Science consists chiefly of course offerings and no more than 6 credit hours of research, with special emphasis on a major subject to be selected from one of the several departments. Work for the degree of Doctor of Philosophy is limited to a few selected fields and will consist of research as well as the required course work.
Departmental Staffs

Agricultural Biochemistry

Professors DUSTMAN and VANLANDINGHAM

Chemistry courses for agricultural and home economics students of under graduate rank are offered in the College of Arts and Sciences (see Chemistry). Graduate work may be pursued under the general research course outlined under Agriculture, above

220. **Chemistry of Animal Nutrition.** II. 4 Hrs. Proximate analysis of foods and rations. Digestion and metabolism of food nutrients. Chemical, biological, and microbiological assay of vitamins. 2 lect., 2 lab. Offered in alternate years. PR: Chem. 6 and 31 and Biochem. 239 or its equivalent. Mr. VanLandingham

280, 281, **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester Staff

CHEMISTRY

31, 131. **Organic Chemistry.** I. 4 Hrs. For students in Agriculture and Home Economics. Beginning aliphatic organic chemistry and biochemistry. 2 lect., 1 lab., and 1 quiz period weekly. PR: Chem. 2.
Mr. Dustman

218. **Dairy Chemistry.** I. 3 Hrs. Analysis of dairy products. Offered in alternate years (1948-49). For students in Agriculture. PR: for undergraduates, Chem. 31; for graduates, Chem. 6 or 15 and Chem. 31 or 233.
Mr. Dustman

NOTE: For description of the course in general biochemistry see the Announcements of the School of Medicine.

Agricultural Economics

Professor Armentrout, Associate Professors Clarke and Toben, and Assistant Professor Porter

Undergradute Division

101. Agricultural Economics. I. 3 Hrs. Introductory. Mr. Armentrout

102. Agricultural Economics. II. 3 Hrs. Principles as applied to agriculture. PR: Econ. 1 or Agr. Econ. 101. Mr. Armentrout

104. Farm Management. I. 3 Hrs. Types and systems of farming; considerations in starting farming; use of records in solving farm problems; land tenure and leases; production for family use. PR: Econ. 1 or Agr. Econ. Econ. 101; Agr. Econ. 102. Mr. Toben

105. Rural Life. II. 3 Hrs. Social aspects of rural living; characteristics of rural population; its social structure and institutional arrangements (family, community, education, religion, recreation, health, welfare, and local government). Mr. Porter

131. Marketing Agricultural Products. II. 3 Hrs. Principles and practices. Tour of market facilities in Pittsburgh area required. PR: Econ. 1 or Agr. Econ. 101 and Agr. Econ. 102. Mr. Clarke

160. Dairy Accounting. II. 2 Hrs. System designed especially for use of medium-sized dairy manufacturing plants; offered in 1948-49 and alternate years. Mr. Armentrout

206. Farm Planning. I. 3 Hrs. Principal factors influencing returns on farms; planning use of labor, soil, crops, livestock, buildings, and equipment. Farm visits required. PR: senior standing. Mr. Toben

230. Cooperative Marketing. II. 2 Hrs. Principles and practices of cooperation as applied to marketing of agricultural products and to purchase of farm supplies. PR: Econ. 1 or Agr. Econ. 101 and Agr. Econ. 102. Mr. Clarke

235. Marketing Dairy Produucts. II. 2 Hrs. Milk-marketing policies and practices, including federal milk-market orders. PR: Econ. 1 or Agr. Econ. 102. Mr. Clarke

250. Agricultural Statistics. II. 3 Hrs. Sources and methods of collecting and analyzing; construction of statistical tables, charts, graphs, etc. Mr. Clarke

280, 281. Special Topics. I and II. 2 or 3 Hrs. per semester. Staff

Graduate Division

340. Advanced Farm Management. I. 3 Hrs. Mr. Toben

341. Production Economics. II. 3 Hrs. Economic principles of production with special application to agriculture. Mr. Armentrout

342. Advanced Agricultural Economics. II. 3 Hrs. Mr. Armentrout

380, 381, 382, 383. Research. I and II. 1 to 6 Hrs. per semester. Staff

Agricultural Engineering

Professor LONGHOUSE and Assistant Professor EMERSON

1. **Introductory Farm Mechanics.** I. 3 Hrs. Elementary mechanics applied to farm water supply and control, buildings, electricity, and power. Mr. Emerson

151 **Mechanics of Soil and Water Conservation** . SII. 4 Hrs. Planning and installation of farm land drainage, contour strip cropping, terracing, and farm ponds. Staff

152. **Farm Shop.** I. 3 Hrs. The place of farm shop on the farm. Construction and repair problems including carpentry, metal working, forging, fitting tools, repairing harness, and filing saws. Not open to students who have had Course 2. Mr. Emerson

153. **Farm Machinery.** II. 3 Hrs. Principles underlying construction, adjustment, care, use, and repair of farm machinery . This will include tillage, harvesting, and seeding machinery. PR: Course 2 or 152. may be taken concurrently. Mr. Longhouse

155. **Household Equipment.** II. 2 Hrs. Planned to help students understand the mechanical equipment in the home and its effective use. Staff

159. **Farm Structures.** I. 3 Hrs. Fundamental principles of farm-building construction. Mr. Longhouse

170. **Rural Electrification.** I. 3 Hrs. Fundamentals of electricity and its application in the home and on the farm. Open to Agriculture students only, or instructor's permission to register. Staff

252. **Advanced Farm Mechanics.** I. 3 Hrs. Forging, cold-iron work, tool-fitting, woodworking; offers training for teaching shopwork in rural high schools. PR: Agr. Engineering 2 or 152. Mr. Emerson

253. **Advanced Farm Machinery.** II. 3 Hrs. Trends and economic use of farm machinery. Primarily for graduate vocational agriculture teachers. PR: Agr. Engineering 153. Open to Agriculture students only or by instructor's permission. Mr. Longhouse

255. **Care and Repair of Home Equipment.** II. 2 Hrs. For advanced and graduate students. Construction, maintenance, and repair of household equipment. Their comparative cost and economic use will be studied. Staff

259. **Functional Requirements of Farm Buildings.** I. 3 Hrs. Special problems re livestock and storages. PR: course 159 or consent. Mr. Longhouse

270. **Electricity in Agriculture.** I. 3 Hrs. PR: course 170 or consent. Mr. Longhouse

280, 281. **Special Topics.** I, II. 2 to 4 Hrs. per semester. Staff

380, 381. **Research.** I and II. 6 Hrs. per semester. Staff

The following courses are recommended for Agriculture students who wish to choose additional electives in Engineering.

M.E. 15. **Welding, Forming, and Heat Treatment.** I, II. 2 Hrs.

M.E. 11. **Machine Shop.** I, II. 2 Hrs.

M.E. 12. **Machine Shop.** I, II. 1 Hr.

M.E. 20. **Mechanical Drawing.** I, II. 3 Hrs.

Agronomy and Genetics

Professor POHLMAN; Associate Professors CARTLEDGE, TYNER, and VEATCH; Assistant Professor SCHALLER; Instructor WEBB

AGRONOMY

Undergraduate Division

1. **Farm Crops.** I. 4 Hrs. Cereal, forage, and pasture crops. PR: Botany 2. Mr. Veatch

2, 102. **Soils.** II. 3 Hrs. The properties of soils. PR: Geology 4 and Chemistry 31. Mr. Pohlman and Mr. Webb

10. **Forest Soils.** I. 3 Hrs. Properties of soils in relation to forestry. PR: Geol. 1 and Chem. 2. Mr. Pohlman and Mr. Webb

124. **Climatology and Hydrology.** II. 3 Hrs. Mr. Galpin and Staff

200. **Advanced Crops.** II. 2 or 3 Hrs. Production, classification, and market grading with particular emphasis on forage crops. PR: Agronomy 1. Mr. Veatch

205. **Soil Conservation.** I. 2 Hrs. Causes of soil erosion and methods for its control. One or two half-day field trips will be made during the semester. PR: Agronomy 2 or 10. Mr. Tyner

210. **Fertilizers and Soil Fertility.** II. 3 Hrs. Soil fertility; theories and practices in use of fertilizer. PR: Agronomy 2. Mr. Pohlman

215. **Development and Classification of Soils.** I. 3 Hrs. Morphology, genesis and classification of soils. Soil survey methods, mapping of an assigned area, and characteristics of some important soil series of West Virginia and the United States. PR: Agronomy 2 or 10. Mr. Tyner

220. **Pasture Management.** II. 3 Hrs. Methods used in establishing and managing various types of permanent, rotation, and supplementary pastures. Mr. Schaller

230. **Soil Physics.** II. 3 Hrs. Physical properties of soils in relation to crop growth, water movement, and erosion control. Staff

280, 281. **Special Topics.** I, II. 2 to 4 Hrs. per semester. Staff

316. **Soil Chemistry.** II. 3 Hrs. Fundamental chemical properties of soils in relation to plant growth; nature and properties of soil colloids; base exchange and soil acidity; availability of plant food elements and soil-plant interrelationships. Offered in 1947-48 and in alternate years. Mr. Tyner

350, 351. **Seminar.** I and II. 1 Hr. per semester. Recent literature pertaining to soils and crop production. Staff

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

BACTERIOLOGY

314. **Soil Microbiology.** II. 3 Hrs. Occurrence of micro-organisms in soils and their relationship to decomposition of organic matter, availability of plant nutrients, and soil acidity; technique of isolation and study. Offered in 1949-50 and in alternate years. Mr. Wilson

GENETICS

Undergraduate Division

II, III. **Elementary Genetics.** I, II. 2 Hrs. Elementary study of the principles of heredity. Mr. Cartledge

112. Genetics Laboratory. I, II. 1 Hr. Breeding experiments. Mr. Cartledge

220. Crop Breeding. II. 3 Hrs. Methods and basic scientific principles involved in the improvement of leading cereal and forage crops through hybridization and selection. PR: Genetics 111 or 221 -- Mr. Veatch

221. Genetics. I. 3 Hrs. Fundamental principles of inheritance. Mr. Cartledge

222, Advanced Genetics. II. 3 Hrs. PR: Genetics 221. Mr. Cartledge

250, 251. Seminar. I and II. 1 Hr. per semester. Recent literature pertaining to breeding, genetics, and cytology. Staff

280, 281. Special Topics. I and II. 2 to 3 Hrs. per semester Staff

Graduate Division

332. Biometry. II. 3 Hrs. Statistical analysis of biological data. Offered in 1947-48 and alternate years. Mr.----------

380, 381, 382, 383. Research. I and II. 1 to 6 Hrs. per semester. Staff

Animal Husbandry

Professors LIVESAY, OLSON, SCHNEIDER, and WILSON; Associate Professors BLACK, CLARKE, and HYRE; Assistant Professor BLETNER; Graduate Assistant GROSE

ANIMAL HUSBANDRY

Undergraduate Division

11. Types, Breeds, and Market Classes of Livestock.* I. 3 Hrs. Mr. Wilson

101. Animal Nutrition.* I. 3 Hrs. Digestion and metabolism of food nutrients, nutrient requirements of farm animals, and nutritive values of feeds and rations. PR: Chemistry 31. Mr. Schneider

104. Animal Industry. II. 4 Hrs. Importance of all classes of farm animals to land and food conservation. Three lectures and 1 laboratory. Mr. Livesay and Staff

138. Livestock Grading and Selection. II. 2 Hrs. Mr. Black

141. Beef Production. I. 3 Hrs. Mr. Livesay

142. Pork Production. II. 3 Hrs. Mr. Black

143. Advanced Livestock Judging. I. 2 Hrs. Students taking this course will be required to participate in a tour of inspection of representative flocks, herds, and studs. Mr. Black

162. Mutton and Wool Production. II. 3 Hrs. Mr. Wilson

163. Horse Production. I or II. 2 Hrs. Emphasis on light-horse production, training, and use for pleasure. Mr. Livesay

166. Meats II. 2 Hrs. Lectures and demonstrations on the identification, selection, and nutritive value of meat cuts. Primarily for home economics students. Mr. Grose

167. Meats. I. 2 Hrs. Farm butchering, curing, and care of meats. Visit to one of the large packing houses of Pittsburgh required of all students taking this course. Mr. Black

169. **Meat Judging.** I. 1 Hr. Mr. Grose

203. **Advanced Animal Nutrition.** I. 3 Hrs. The chemistry of feeding stuffs and of the animal body, as well as of the digestion and metabolism of food nutrients. Mr. Schneider

222. **Breeding Farm Animals.** II. 3 Hrs. Physiology of reproduction; inheritance; selection, care, and management of breeding animals. PR: Genetics 111 or 221. Mr. Livesay

223. **Advanced Livestock Production.** I. 3 Hrs. Mr. Livesay

224. **Advanced Livestock Production.** II. 3 Hrs. Mr. Wilson

235, 236. **Current Literature.** I and II. 1 Hr. per semester. Staff

280, 281. **Special Topics.** I, II, S. 2 or 3 Hrs. per semester. Advanced studies in various phases of animal husbandry or poultry husbandry; animal genetics; energy metabolism; protein metabolism; vitamin studies; parasitology; meats; pedigrees. Staff

*Animal Husbandry 11 and 101 are prerequisite to all other courses in the department, including animal pathology courses.

Graduate Division

351, 352. **Seminar.** I, II. 1 Hr. Animal and Dairy Husbandry Staffs

370. **Methods of Animal Husbandry Research.** I, II, S. 3 Hrs. A study of research methods which are being used in conducting experimental work in animal husbandry. Staff

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Available to students in all divisions of Animal Husbandry. Staff

ANIMAL PATHOLOGY

102. **Animal Pathology.** I. 3 Hrs. PR: General Zoology. Mr. Olson

106. **Animal Diseases and Parasite Control.** I. 3 Hrs. Two lectures and 1 laboratory. Mr. Olson

206. **Parasites and Pathology.** II. 3 Hrs. PR: Invertebrate zoology; for non-agricultural students, consent of instructor. Mr. Olson

POULTRY HUSBANDRY

1. **Poultry Production.** II. 4 Hrs. Prerequisite to all other poultry courses. Messrs. Hyre and Bletner

103. **Poultry Feeding and Management.** I. 3 Hrs. Factors in poultry production, feeding and management as related to scientific investigations. Mr. Bletner

105. **Poultry Judging.** I. 2 Hrs. Practice in selection of birds for both standard and production qualities. Mr. Hyre

112. **Incubating and Brooding Chicks.** II. 2 Hrs. Mr. Bletner

211. **Breeding and Selecting Chickens for Meat and Egg Production.** I. 2 Hrs. Mr Hyre

213. **Turkey Production.** I. 2 Hrs. Messrs. Clark and Bletner

Conservation

Professor BROOKS

2. **Principles of Conservation.** II. No credit. Survey of conservation as a professional field; study of work to be done by the conservationist. Mr. Brooks and Staff

150. **Conservation Practices.** II. 3 Hrs. History of conservation development: study of conservation practices in the fields of soil, water, forests, and wildlife. Two lectures and 1 laboratory. Mr. Brooks and Staff

Dairy Husbandry

Professors HENDERSON and HYATT; Assistant Professors WEESE, ACKERMAN, and TYLER; Instructor FIKE

Undergraduate Division

12. **Farm Dairying.** II. 3 Hrs. Introductory. Composition and properties of milk and milk products; butterfat testing; manufacture of dairy products. Mr. Weese

102. **Ice Cream and Refrigeration.** II. 3 Hrs. Offered in 1948-49 and alternate years. Manufacture of ice cream; principles of refrigeration involved in the manufacture and storage of dairy products. Mr. Weese

103. **Market Milk.** I. 3 Hrs. Offered in 1947-48 and alternate years. Market milk and the manufacture of dry and condensed milk. Mr. Weese

104. **Butter and Cheese.** II. 3 Hrs. Offered in 1947-48 and alternate years. Manufacture of butter and various types of cheese. Mr. Weese

107. **Milk and Public Health.** I. 2 or 3 Hrs. Food value of milk and its production and processing in relation to public health. Mr. Henderson and Mr. Weese

111. **Dairy Production.** I. 3 Hrs. Introductory. Breeds of dairy cattle, their selection, feeding, and management. Mr. Henderson and Mr. Ackerman

123. **Dairy Judging.** II. 1 or 2 Hrs. Judging of dairy cattle and dairy products. Required of all members of dairy-cattle or dairy-products judging teams. Mr. Hyatt and Mr. Weese

204. **Dairy Technology.** II. 4 Hrs. Chemical and bacteriology methods used in the technical control of milk and milk products. Mr. Weese

221. **Dairy Cattle.** I. 3 Hrs. History of breeds and families of registered dairy cattle. Organization and activities of breeding associations. Mr Hyatt

222. **Milk Production.** II. 4 Hrs. Feeding and management of dairy cattle. Mr. Henderson

280. 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. For advanced dairy students who desire to pursue study along some particular phase of dairying. Staff

Graduate Division

351, 352. **Seminar.** I, II. 1 Hr. Dairy and Animal Husbandry Staffs

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. For graduate students working on a problem for preparation of a thesis. Staff

BACTERIOLOGY

246. Dairy Bacteriology. II. 3 Hrs. See under "Bacteriology," page 108.

CHEMISTRY

218. Dairy Chemistry I. 3 Hrs. See under "Chemistry," page 100.

Entomology

Professor PEAIRS

2, 102. **Entomology.** II. 4 Hrs. Biological, morphological, taxonomic, and economic phases of the study of insects. PR: Invertebrate zoology. Mr. Peairs

103. **Economic Entomology.** I. 2 Hrs. Standard practices in insect control; methods for study of injurious insects. Professional requirements in entomology. PR: Ent. 2 or equivalent. Mr. Peairs

152. **Forest Entomology.** I. 4 Hrs. Insects of importance to the forester; recognition and control of insect pests in the forest. Mr. Peairs

201. **Survey of Applied Entomology.** I. 3 to 5 Hrs. Principles underlying the control of insects; cultural, biological, and chemical. Practice in biological and control investigations. Prerequisite for graduate credit: 20 hours in the field of biology. Not open to students who have credit in Ent. 102. Mr. Peairs

204, 205. **Taxonomy.** I, II, S. 2 or 3 Hrs. per semester. Studies in the families and genera of insects of the region: detailed studies in restricted groups for qualified students. Mr. Peairs

280, 281. **Special Topics.** I, II, S. 2 or 3 Hrs. per semester. Advanced studies in the field of interest of the student. The following are available: life history studies; response of insects to climatic variables; insect toxicology; injurious insects. Mr. Peairs

Graduate Division

370. **Methods of Entomological Research.** I, II. 3 Hrs. A study of methods which have been proposed and used for the solution of problems arising in the study of insect biology. Mr. Peairs

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester. Staff

Horticulture

Professors MARSH and WESTOVER; Associate Professors SUDDS and CHILDS; Assistant Professors DYE and NEAL; Instructor DOWNES

Undergraduate Division

1. **Principles of Horticulture.** II. 4 Hrs. Vegetable production. Prerequisite to all courses in olericulture. Mr. Westover and Mr. Downes

102. **Principles of Horticulture.** I. 4 Hrs. Basic horticulture, fruit production, and ornamental horticulture. PR to all courses in pomology. Mr. Sudds and Mr. Childs

103. **Principles of Horticulture.** I. 3 Hrs. Staff

115. **Judging and Identification of Apple Varieties.** I. 1 Hr. Two laboratory periods first half of semester. Mr. Childs

139. **Landscape Gardening.** I. 3 Hrs. Theory and practice of landscape design with special application to home grounds. Staff

140. **Plant Materials.** II. 3 Hrs. Important woody and herbaceous plants used in landscape gardening. Mr. Neal

141. **Greenhouse Management.** II. 3 Hrs. Practical operation of temperatures, humidities, disease and insect control, and watering. Mr. Dye

206 **Small-Fruits Production.** II. 3 Hrs. A practical and scientific study of standard cultural practices in the small-fruits plantation. Mr Childs

209. **Systematic Pomology.** I. 3 Hrs. History, botany, and classification of fruits. Offered in 1947-48 and alternate years. Mr. Marsh and Mr. Neal

212 **Commercial Tree-Fruit Production.** II. 3 Hrs. Latest methods in pruning, spraying, soil culture, and other production practices for fruit tres from the practical and scientific standpoint. Mr Sudds

213 **Harvesting, Packing, and Storage of Fruits.** I. 3 Hrs. Instruction in maturity standards for harvesting, grading according to national and state standards, and planning and management of packing houses and storages. Mr. Marsh and Mr Childs

232. **Commercial Vegetable Production.** II. 3 Hrs. Current methods of commercial vegetable crop production, including equipment, soil and climatic adaptation, plant raising, soil culture, harvesting, grading, and packing. Mr. Westover and Mr. Downes

233. **Systematic Olericulture.** I. 3 Hrs. History, botany, and classification of vegetable crops. Offered in 1948-49 and alternate years. Mr. Westover and Mr. Downes

280. 281. **Special Topics.** I and II. 2 or 3 Hrs. per semester. Staff

Graduate Division

380, 381, 382, 383. **Research.** I and II. 1 to 6 Hrs. per semester Staff

Plant Pathology and Bacteriology

Professors LEACH and TAYLOR; Associate Professors BARNETT and WILSON; Assistant Professor CRUZ

BACTERIOLOGY

Undergraduate Division

41. 141. **General Bacteriology.** I, II, S. 4 Hrs. (3 Hrs. for Engineering students). PR: Chem. 1 and 2. Introductory. Morphological, cultural, and physiological characteristics of bacteria, and application of bacteriology to agriculture, home economics, sanitation, and health. Mr. Wilson

241. **General Bacteriology.** I, II, S. 4 Hrs. PR: Chem. 1 and 2. Open only, with consent of instructor, to graduate students not majoring in department. Not open to students having credit for Bact. 141. Similar to 141 but with opportunity for study in field of student's interest. Mr. Wilson

246. **Dairy Bacteriology.** I. 3 Hrs. PR: Bact. 141. Microorganisms in market milk,

in manufacture of butter, cheese, and fermented milk, and in milk hygiene; practice in preparation of media; making bacterial counts in milk. Offered in 1948-49 and alternate years. Mr. Wilson

248. **Bacteriological Water Analysis.** II. 2 Hrs. PR: Bact. 141. Standard bacteriological methods used in routine examination of water and sewage. Offered in 1949-50 and alternate years. Mr. Wilson

280. 281. **Special Topics.** I, II, S. 1 to 4 Hrs. per semester. Mr. Wilson

Graduate Division

314. **Soil Microbiology.** II. 3 Hrs. PR: Bact. 141. Occurrence and distribution of microorganisms in soils and their interrelationships. Their role in decomposition of organic matter and other transformations of soil constituents. Mr. Wilson

380, 381, 382, 383. **Research.** I, II, S. 1 to 6 Hrs. per semester. Mr. Wilson

PLANT PATHOLOGY

Undergraduate Division

103. **Elementary Plant Pathology.** I. 4 Hrs. PR: Botany 4 and Bact. 141. Nature and causes of plant diseases; methods of control.
Mr. Leach and Mr. Taylor

153. **Forest Pathology.** II. 4 Hrs. PR: Botany 2. Important diseases of forest and shade trees; causes and methods of control. Mr. Leach and Miss Clulo

202. **General Plant Pathology.** II. 5 Hrs. PR: Bact. 141 or least 12 hrs. in botany and general biology. Nature of diseases in plants, with practice in laboratory methods. Mr. Leach and staff

203. **Mycology.** I. 4 Hrs. Lectures; field laboratory studies of parasitic and saprophytic fungi. Mr. Barnett

280. 281. **Special Topics.** I, II, S. 2 to 4 Hrs. per semester. Staff

Graduate Division

312. **Pathological Anatomy.** I. 3 Hrs. A study of the abnormal tissue changes in plants. Offered in 1948-49 and alternate years. Miss Clulo

313. **Insect Transmission of Plant Diseases.** I. 3 Hrs. The role of insects in the spread and development of plant diseases and the relationship of insects to plant-disease control. PR: Plant Pathology 103 or Entomology 102. Offered in 1947-48 and alternate years. Mr. Leach

320. **Taxonomy of the Fungi.** S. 2 Hrs. PR: Pl. Path. 203. Collection and identification of fungi, with emphasis upon those of economic importance.
Mr. Barnett

330. **Physiology of the Fungi.** II. 3 Hrs. PR: Organic chemistry, mycology, and bacteriology, or consent of instructor. Physiological aspects of growth, reproduction, and parasitism of fungi, with emphasis on nutrition, enviroment, and other biotic factors. Mr. Barnett

351. 352. **Seminar.** I, II. 1 Hr. Mr. Leach and Staff

380, 381, 382, 383. **Research.** I, II, S. 1 to 6 Hrs. Staff

Rural Organization

Professor PARSONS and Associate Professor HILL

118. Organizations and Clubs for Farm Boys. II. 2 Hrs. Problems involved in directing the activities of F. F. A., and similar organizations.
Mr. Parsons or Mr. Hill

134. Methods of Agricultural Extension. I. 2 Hrs. Activities of the county agricultural and home demonstrtaion agents and of the agricultural extension program of West Virginia. Offered in 1948-49 and alternate years. Mr. Parsons

***160. Education—Materials and Methods of High-school Teaching of Vocational Agriculture.** I, II. 3 Hrs. Organization and Preparation for teaching vocational agriculture in the high school.
Mr. Parsons or Mr. Hill

***Ed. 224. Student Teaching in Vocational Agriculture.** I. II. 4 Hrs.
Mr. Parsons or Mr. Hill

Ed. 276. Methods in Special Vo-Ag Projects. II. 2 Hrs. PR: Ed. 160. Organization of class groups; methods of teaching and supervision in young and adult-farmer classes. Participation in conducting such classes.
Mr. Parsons or Mr. Hill

Ed. 277. Organizing and Directing Suupervised Vo-Ag Practice. I. 2 Hrs. Planning programs of supervised practice, supervising, and evaluating such programs for all-day, part-time, and evening-school students. Consent of instructor. Mr. Parsons or Mr. Hill

Ed. 278. Planning Programs and Courses for Vo-Ag Departments. II. 2 Hrs. gathering data and studying farming problems and practices for all-day, part-time, and evening-school students. Consent of instructor.
Mr. Parsons or Mr. Hill

280, 281. Special Problems. I, II. 2 to 3 Hrs. per semester. PR: adequate ability and training for the work proposed and permission to register.
Staff

380, 381. Research. I. and II. 1 to 6 Hrs. per semester. Staff

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THE DIVISION OF FORESTRY

The professional forester's work includes such diversified activities as timber production, logging, surveying, park management, forest protection, forest-stand improvement, flood control, watershed protection, soil-erosion control, submarginal land development, restoration of game, stream development, and construction of public camps and summer home sites. The wide scope of the modern field of forestry demands a thorough basic training for the professional forester. This accounts for the large number of required courses in the professional forestry curriculum If the forester wishes to specialize in any one branch of the field, graduate work is needed.

The course leading to the degree of Bachelor of Science in Forestry is designed to train the student for a professional forestry career in either public or private forestry work. Graduates should be equipped to hold posi-

*See the bulletin, **Requirements Applicable to Degrees and to Teacher Certification**, for additional requirements for certification to teach vocational agriculture.

tions with the U. S. Forest Service, with the Forestry Division of the U. S. Indian Service, with the Soil Conservation Service, with the National Park Service, and with other federal agencies employing professional foresters; with the various state forestry departments; and with those private forest land owners—both corporate and individual—who employ technical foresters.

The curriculum includes a two years' broad foundational study of the natural, mathematical, and social sciences basic to the field, followed in the junior and senior years by more detailed study of forestry principles and technique. Many of the courses in the curriculum provide for field laboratories enabling the student to see first-hand applications of the principles presented in the classroom and to experiment with the various techniques he is learning.

An important part of the course is the ten weeks' forestry camp attended at the end of the sophomore year. At this camp the student is instructed in the field practice of land surveying and forest measurements and has opportunity to observe various forest operations on both public and private lands. Courses are offered also in game management and in other phases of the recreational use of public and private lands.

The Curriculum in Professional Forestry

FIRST YEAR—ALL STUDENTS

First Semester	Hrs.	Second Semester	Hrs.
Biology 1—General	4	Biology 2—General	4
Chemistry 1—General	4	Chemistry 2—General	4
English 1—Composition	3	English 2—Composition	3
Forestry 1—Profession	1	Forestry 2—Profession	1
Math. 2 or 3—Algebra or College Algebra	3	Math. 10 or 4—Plane Trigonometry	3
Military Science 1—Basic	2	Military Science 2—Basic	2
Physical Education 1—Service Program	1	Physical Education 2—Service Program	1
	18		18

SECOND YEAR—First Semester

GENERAL FORESTRY AND FOREST MANAGEMENT		WILD LIFE MANAGEMENT		FOREST UTILIZATION	
Agron. 10—Forest Soils	3	Agron. 10—Forest Soils	3	Agron. 10—Forest Soils	3
C. E. 5—Land Surveying	4	C. E. 5—Land Surveying	4	C. E. 5—Land Surveying	4
For. 3—Dendrology	3	For. 3—Dendrodogy	3	For. 3—Dendrology	3
Mil. Sci. 3—Basic	2	Mil. Sci. 3—Basic	2	Mil. Sci. 3—Basic	2
Bot. 32—Systematic	2	Bot. 32—Systematic	2	Math. 5—Analytic Geom.	4
Electivves	6	Electives	6	Electives	3
	20		20		19
Recommended Electives		*Recommended Electives*		*Recommended Electives*	
Econ. 1 or Ag. Econ. 101—Principles	3	Econ. 1 or Ag. Econ. 101—Principles	3	Econ. 1 or Ag. Econ. 101—Principles	3
Geol. 1—Physical	3	Geol. 1—Physical	3	Geol. 1—Physical	3
				Bot. 32—Systematic	2

SECOND YEAR—Second Semester

GENERAL FORESTRY AND FOREST MANAGEMENT		WILD LIFE MANAGEMENT		FOREST UTILIZATION	
Bot. 21—Plant Physiology	2	Bot. 21—Plant Physiology	2	Bot. 21—Plant Physiology	2
C. E. 6—Topographic Mapping	2	C. E. 6—Topographic Mapping	2	C. E. 6—Topographic Mapping	2
For. 4—Dendrology	3	For. 4—Dendrology	3	For. 4—Dendrology	3
For. 11—Silvics	2	For. 11—Silvics	2	For. 11—Silvics	2
For. 21—For. Mensuration	4	For. 21—For. Mensuration	4	For. 21—For. Mensuration	4
Mil. Sci. 4—Basic	2	Mil. Sci. 4—Basic	2	Mil. Sci. 4—Basic	2
For. 15—Silvics Lab.	1	For. 15—Silvics Lab.	1	Elective	1
Elective	1	Elective	1		
	17		17		16
Recommended Electives		*Recommended Electives*		*Recommended Electives*	
For. 170—Problems	1	For. 170—Problems	1	For. 170—Problems	1
				For. 15—Silvics Lab.	1

SUMMER PRECEDING THIRD YEAR—ALL STUDENTS

Forestry 100 —Junior Forestry Camp—10 Weeks—10 Hours' Credit

THIRD YEAR—First Semester

GENERAL FORESTRY AND FOREST MANAGEMENT		WILD LIFE MANAGEMENT		FOREST UTILIZATION	
For. 131—Wood Technology	3	For. 131—Wood Technology	3	For. 151—Wood Technology	3
Physics 1—Introductory	3	Physics 1—Introductory	3	Physics 105—General	4
Physics 3—Intro. Lab	1	Physics 3—Intro. Lab.	1	Physics 107—Gen. Lab.	1
For. 151—For. Protection	2	For. 151—For. Protection	2	Chemistry 131 Organic	4
For. 114—For. Econ. & Fin.	3	Entomology 152—Forest	4	Math. 107—Integral Calcul.	4
Electives	4	Electives	5	For. 132—Adv. Wood Tech.	3
	16		18		
Recommended Electives		*Recommended Electives*		*Recommended Electives*	
For. 171—Problems	1	For. 171—Problems	1	For. 171—Problems	1
For. 132—Adv. Wood Tech.	3	Zool. 231 Compar. Anat.	5		

THIRD YEAR—Second Semester

GENERAL FORESTRY AND FOREST MANAGEMENT		WILD LIFE MANAGEMENT		FOREST UTILIZATION	
For. 112—Silvic. Systems	3	For. 112—Silvic. Systems	3	For. 112—Silvic. Systems	3
For. 125—For. Policy & Adm.	3	For. 125—For Policy & Adm.	3	Math. 108—Integral Calcul.	4
For. 116—Regional Silvic	1	Electives	10	M. E. 20—Mechan. Drawing	3
Electives	10			Physics 106—General	4
				Physics 108—Gen. Lab.	1
				Electtives	1
	17		16		16

Recommended Electives		*Recommended Electives*		*Recommended Electives*	
For. 113—Seeding & Plant	3	For. 113—Seeding & Plant.	3	For. 125—For. Policy & Adm.	3
For. 142—Recreational Dev.	2	For. 142—Recreational Dev.	2	For. 172—Problems	1
For. 143—Forest Range	2	For. 143—Forest Range	2	Chem. 106—Quant. Analysis	4
For. 172—Problems	1	For. 172—Problems	1		
		For. 146—Ornithology	2		
		For. 116—Regional Silvic	1		

FOURTH YEAR—First Semester

For. 123—For. Management	3	For. 123—For. Management	3	For. 123—For. Management	3
For. 134—For. Products	2	For. 134—For. Products	2	For. 134—For. Products	2
Entomology 152—Forest Entomology	4	For. 114—For. Econ. & Fin.	3	For. 135—Wood Conditioning	3
Electives	9	Electives	9	Electives	9
	18		17		17

Recommended Electives		*Recommended Electives*		*Recommended Electives*	
For. 124—For. Valuation	3	Bot. 221—Plant Physiology	4	Chem. 105—Qual. Analysis	4
For. 127—For. Management Plans	2	Bot. 232 or 236—Pl. Ecology or Geographic Botany	3	For. 114—For. Econ. & Fin.	3
For. 135—Wood Conditioning	3	For. 173—Problems	1	Entomology 152—Forest	4
For. 173—Problems	1	Zool. 236 or 237—Animal Behavior or Ecology	3	For. 173—Problems	1

FOURTH YEAR—Second Semester

Pl. Pathology 153—Forest	4	Pl. Pathology 153—Forest	4	Pl. Pathology 153—Forest	4
For. 133—Lumbering	3	For. 141—Game Management	3	For. 133—Lumbering	3
For. 141—Game Management	3	For 144—For. Zoology	3	Electives	10
Electives	6	For. 145—Life Hist. Game An.	3		
		Electives	3		
			16		17

Recommended Electives		*Recommended Electives*		*Recommended Electives*	
For. 122—For. Mensuration	3	An. Path. 102—Animal Path.	3	Mech. 102—Mechanics of Materials	4
For. 126—For. Measurement by Aerial Photographs	2	For. 126—For. Measurement by Aerial Photographs	2	M. E. 220—Heat & Power Eng.	3
For. 144 Forest Zoology	3	For. 182—Hillculture	2	For. 122—For. Mensuration	3
For. 145—Life Hist. Gm.. An	3			For. 126—For. Measurement by Aerial Photographs	2
For. 182—Hillculture	2				

COURSES OF INSTRUCTION IN FORESTRY

Professors PERCIVAL, BESLEY, BROOKS, and HOLSOE; Associate Professor MARRA; Assistant Professors BYERS, DUGAN, and TRYON; Instructor MYERS

1, 2. **The Profession of Forestry.** I and II. 1 Hr. per semester. Survey of the profession of forestry and of the opportunities available to trained men. Required of all freshmen in forestry. Mr. Percival

3. **Dendrology.** I. 3 Hrs. Classification, identification, and distribution of the timber trees of the United States. PR: Biol. 2. Mr. Core

4. **Dendrology.** II. 3 Hrs. Continuation of Forestry 3. Mr. Core

5. **Land Surveying.** I. 4 Hrs. Principles and techniques of land surveying, including boundary and topographic surveys, location of roads, and computation of areas PR: Math. 10. Mr. Baker

6. **Topographic Mapping.** II. 2 Hrs. Practice in lettering and drawing topographic maps from field data. Also mapping in the field with traverse-board outfits. PR: C. E. 5. Mr. Baker

7. **Introduction to Forestry Field Practice.** S. 6 to 12 weeks. 6 to 12 Hrs. Field practice in elementary forest surveying and measurements. Commercial tree identification and measurement and sample-plot work. Arrange with instructor before registering. Mr. Besley and Staff

10. **Forest Soils.** I. 3 Hrs. Properties of soils in relation to forestry. PR: Geol. I and Chem 2. Mr. Pohlman

11. **Silvics.** II. 2 Hrs. Forest and environment factors; site and type characteristics. PR or conc: For. 4. Mr. Tryon

15. **Silvics Laboratory.** II. 1 Hr. PR or conc: For 11. Mr. Tryon

21. **Forest Mensuration.** II. 4 Hrs. Measurement of forest products, trees, and stands; timber estimating; introduction to growth and yield. PR: Civil Engineering 5. Mr. Byers

46, 146. **Ornithology.** II. 2 Hrs. Identification, distribution, and ecology of birds (particularly of forest lands). PR: Biol. 1 and 2 or consent of instructor. Mr. Brooks

100 **Forestry Camp.** S. Ten weeks. 10 Hrs. Field practice in land surveying, forest measurements, and tree identification; observation of forest types, forest improvements, and utilization practices. PR: Civil Engineering 6 and Forestry 4 and 21. Mr. Byers and Staff

112. **Silvicultural Systems.** II. 3 Hrs. Systems used for natural reproduction; intermediate cuttings; planting site selection. PR: For. 11. Mr. Holsoe

113. **Silviculture.** II. 3 Hrs. Nursery practice; seeding and planting; all phases of artificial regeneration. PR: Forestry 11. Mr. Tryon

114. **Forest Economics and Finance.** I. 3 Hrs. Economic and financial aspects of forestry, forest land, and forest industries and exploitation; present and potential forest resources of the U. S. Mr. Besley

116. **Regional Silviculture.** II. 1 Hr. Treatment of various species in different types and regions. PR: For. 11; PR or conc: For. 112. Mr. Holsoe

122. **Forest Mensuration.** II. 3 Hrs .The measurement of growth and yield; statistical methods applied to forest measurement problems. PR: Forestry 21. Mr. Holsoe

123. **Forest Management.** I. 3 Hrs. Practical silvicultural and marketing methods on forest tracts; organization of wild forests and regulation of cut to obtain sustained yield; coordination of multiple uses of same forest. PR: For. 100 and 112. Mr. Besley

124. **Forest Valuation.** I. 3 Hrs. Cost and income items in producing and exploiting forest crops; appraisal of stumpage and damages. PR: For. 114. Mr. Besley

125. **Forest Policy and Administration.** II. 3 Hrs. Land policy in the United States; its historical, legal, and administrative development; the forester's relations with the public. Organization of public and private forest agencies. Mr. Percival

126. **Forest Measurements by Aerial Photographs.** II. 2 Hrs. Obtaining information on forest types and timber volumes from aerial photographs through use of stereoscope, parallax wedge, and other photogrammetric devices. PR: For. 11 and 21. Mr. Holsoe

127. **Forest Management Plans.** I. 2 Hrs. Preparation for profitable management of specific forested areas. PR: For. 100 and 112; PR or conc: For. 123. Mr. Besley

131. **Wood Technology.** I. 3 Hrs. Identification of commercial timbers of U. S.; basic properties and uses of different woods. PR: For. 4. Mr. Marra

132. **Advanced Wood Technology.** I. 3 Hrs. Mechanical and non-mechanical properties of wood; machinery, gluing, finishing, and special processing of wood. PR or conc: For. 131. Mr. Marra

133. **Lumbering.** II. 3 Hrs. Logging practices and lumber manufacture. Logging and mill equipment. Important factors affecting lumber grades. PR: Forestry 100s and 131. Mr. Byers

134. **Forest Products.** I. 2 Hrs. The production and uses of forest products other than lumber and timbers. PR: For. 131 and 132. Mr. Erickson

135. **Wood Conditioning.** I. 3 Hrs. Purposes, effects, and methods of seasoning and preserving wood. PR: For. 131 and 132. Mr. Marra

141. **Game Management.** II. 3 Hrs. Basic principles of handling wild life as a forest crop. (This course is not intended to train wild-life specialists). In recognition of the importance of fish, game animals, and fur-bearing animals in the forest, the course considers the problems of the maintenance of a maximum wild-life population. PR: Botany 32 and Biology 2. Mr. Dugan

142. **Recreational Developments.** II. 2 Hrs. Needs of the active and passive recreationist and means of supplying facilities for meeting these needs on public forests. PR. Civil Engineering 6, and For. 100. Mr. Brooks

143. **The Forest Range.** II. 2 Hrs. A survey of basic range management technique and practices on forest lands, with consideration of range mapping and important forage plants. PR: Civil Engineering 6 and Forestry 100s. Mr. Brooks

144. **Forest Zoology.** II. 3 Hrs. The relationships of mammals, reptiles, amphibians, and fish to the forest, with emphasis on the ecology and taxonomy of these groups. PR: Biol. 2 or Zool. 2 or Zool. 3, Mr. Brooks

145. **Life History of Game Animals.** II. 3 Hrs. Field and laboratory studies of game-bird and game-mammal life histories, with special references to management of populations of these species. PR: Biol. 2 or Zool. 2 or Zool. 3. Mr. Dugan

151. **Forest Protection.** I 2 Hrs. Preventive actions, preparation activities, and control of forest fires as practiced on publicly-owned forests. Mr. Percival

152. **Forest Entomology.** I. 2 or 4 Hrs. Insects of importance to the forester; recognition and control of insect pests in the forest. Students who have credit for Entomology 2 (102) may receive only two hours' credit in this course. Mr. Peairs

153. **Forest Pathology.** II. 4 Hrs. The important diseases of forest and shade trees; their causes and methods of control. PR: Biology 2 and Forestry 131 and 132. Mr. Leach and Miss Clulo

170, 171, 172, 173. **Forestry Problems.** I, II. 1 Hr. per semester. (4 Hrs. maximum.) Mr. Brooks and Mr. Besley

177 **Forestry Field Practice.** S. 6 to 14 weeks. No credit. A refresher field practice course in forest surveying, forest measurements, tree measurements, forest mapping, forest types, and forest management plan techniques. Arrange with instructor before registering. Mr. Besley and Staff

178 **Wood Utilization Studies.** S. 6 to 14 weeks. No credit. Practical refresher course in wood technology, wood conditioning, and forest products. Arrange with instructor before registering. Mr. Marra

180. **Farm Forestry.** II. 2 Hrs. Principles of forest management and their application to the establishment, care, and utilization of the farm woods. PR: Botany 2. Professional forestry students may not take this course for credit. Mr. Dugan

181. **Farm Game.** II. 2 Hrs. Fundamental principles of the natural propagation and management of game and other wild life on the farm, with emphasis on game as a farm crop. (Primarily for students in agriculture.) Professional forestry students may not take this course for credit. Mr. Dugan

182. **Hillculture.** II. 2 Hrs. Special crops for those areas where farms consist of forest land but where population pressure makes especially intensive silvicultural practices both feasible and necessary; development of hillculture stock; preparation of a hillculture farm plan; marketing requirements for hillculture crops. PR: Biol. 2 or Bot. 2; Agron. 2 or 10. Mr. Tryon

183. **Farm Woodlot Management.** II. 3 Hrs. Practical silvicultural methods; regulation of the cut in order to obtain continuous production; preparation of plans for profitable management. PR: For. 180. (No credit for professional forestry students.) Mr. Dugan

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THE DIVISION OF HOME ECONOMICS

Instruction in Home Economics

The Division of Home Economics occupies two floors in the north end of Oglebay Hall, where may be found offices, conference rooms, and a small departmental library, in addition to classrooms and laboratories well equipped for the teaching of related arts, textiles and clothing, and foods and nutrition. Adjacent to the foods laboratories is a family-service unit consisting of a kitchen, dining room, and reception room. Additional laboratories are located outside Oglebay Hall but in close proximity, namely, the University Rural High School, the Home Management House, the Nursery School, and a Cafeteria.

The offerings in the division are designed to meet a wide variety of educational needs. One of the first aims is to help the student understand herself and her own potentialities and to encourage her to assume progressively more and more responsibility for her own development. In addition she will be given school and community laboratory experience, under guidance, to help her develop judgment in meeting situations, lead her to the belief that problems can be solved, and give her increasing confidence in her own ability to solve them.

To assist the student in setting goals and in planning experiences which will help her make progress toward these goals, a special advisory system has been set up. Each lower-division student has a faculty adviser and a student adviser. The student adviser helps her informally in adjusting to her new life as a college student. The faculty adviser counsels the student as to courses and assists in solving problems directly or indirectly affecting her progress in the university.

Plan of Work

The work of the first two years is largely cultural, including courses in written and spoken English, literature, and natural and social sciences. In addition, basic work in four areas—foods, clothing, art, and management—acquaints the student with the field of home economics. Special courses have been arranged for the student who wishes to stay in college only two years and whose main interest is to prepare for homemaking. She may substitute homemaking courses for those in the basic sciences during the first two years. During the last two years the student is given the opportunity of specialization in one of several vocations.

Vocations for Home Economists

West Virginia graduates are now teaching homemaking at junior high school, senior high school, and college levels; others are supervising the teaching of homemaking. Some may be found serving as home-demonstration agents, girls' club leaders, or commercial demonstrators. A considerable number are engaged in institutional work as hospital dietitians or as managers of tea rooms, cafeterias, or college dining halls. Others are engaged in scientific research or in allied work as laboratory technicians.

Social service, through either private or government agencies, has claimed the interest of a number. Nursery schools have turned to West Virginia home-economics graduates for supervisors. Department stores have offered a variety of interesting jobs in selling, counselling, interior decoration, and other phases of retailing. One or two graduates with a flair for writing have found work on women's magazines. New fields are constantly opening up, so that the person trained in home economics has an ever-widening choice of vocations.

The division endeavors to keep in touch with the various agencies which employ home-economics graduates and to assist graduates in finding employment.

The Baccalaureate Degree in Home Economics

The Division of Home Economics offers courses leading to the granting of a B. S. and an A. B. degree in home economics.

The degree of Bachelor of Science in Home Economics will be conferred upon any student who satisfies the entrance requirements and offers 128 hours of college credit including the courses listed below. The student must receive at least as many honor points as credits in order to be eligible for graduation.*

REQUIREMENTS FOR ALL STUDENTS WORKING TOWARD A B. S. H. E. DEGREE

General: Engl. rhetoric, literature, speech (no more than 3 hrs. in latter), 12 hrs.; chemistry 8 hrs.; history, psychology, economics, and sociology, 9 hrs. (with some work in at least two fields); biological science, 8 hrs. (including bacteriology), physical education, 4 hrs. (Humanities 1 may be substituted for 4 hrs. modern European history; Humanities 2 may be substituted for 4 hrs. English literature.) Total, 41 hrs.

Home Economics: foods and nutrition, 6 hrs.; management, 5 hrs.; textiles and clothing, 5 hrs.; applied art, 4 hrs.; child development, 2 hrs.; electives in home economics, 18 hrs. Total, 40 hrs. General electives, 47 hrs. Grand total, 128 hrs.

Sufficient electives are allowed to permit the student to satisfy the requirement for a first-class high school certificate to teach in West Virginia or to fulfill the preparatory requirements for apprenticeship, internship, or similar vocational experiences in a variety of fields including those of institution management, hospital dietetics, food and textile research, retailing, extension work, and other governmental services.

It is suggsted that students carry a maximum of 15 hours while in the Home Management House or while doing Student Teaching.

A student who is working for room and board may not carry more than 14 hours until she has demonstrated that she is able to maintain an average of 1.2 or better while working.

THE A. B. DEGREE WITH MAJOR IN HOME ECONOMICS

Students who wish to offer home economics as a major in the College of Arts and Sciences are referred to the information concerning an A. B. degree with a major in home economics. (See page 174.)

ELECTIVES FOR STUDENTS OUTSIDE THE DIVISION

Students in other colleges wishing to elect courses in home economics will find a number of courses available. The following courses are suggested: Home Economics 1, 2, 3, 4, 13, 14, 18, 33, 50, 116, 117, 134, 138, and 190.

*For a complete description of the honor-point system see page 56.

CLASSIFICATION OF STUDENTS

To be classified as a conditional freshman a student must have credit for at least 15 units of entrance requirements; to be classified as a regular freshman she must have fulfilled all entrance requirements. To be classi- junior, 58 hours; as a senior, 92 hours.

The Suggested Curriculum for the First Two Years

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 3, 4,		Speech 3,	
Chem. 1*	4	Chem. 2	4	or 5	3	6, or 11	3
(or)		History 2	3	*(or)*		Physiology 51	4
History 1	3	*(or)*		Humanities 2	4	Home Ec. 33	2
(or)		Humanities 1	4	Home Ec. 13	4	Home Ec. 50	2
Humanities 1	4	Home Ec. 2	2	Home Ec. 18	3	Phys. educ.	1
Home Ec. 1	2	Home Ec. 3	2	Biology 1	4	Econ. or sociol.	3
Home Ec. 4	2	Phys. educ.	1	Econ. or sociol.	3		
Phys. educ.†	1			Phys. educ.	1		

*Prospective dietitians should elect Chemistry 1 and 2.

†Students must elect 4 courses—one from each group: Athletics 9 or 10; Dancing 2, 3, 4, or 15; Individual Activity 6, 7, 8, or 57; and Swimming 1 or 16.

The Suggested Curriculum for Those Who Expect to Terminate Work at End of Two Years

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Eng. 3, 4, or 5	3-4	Speech 3,	
History 1	3	History 2	3	*(or)*		6, or 11	3
(or)		Home Ec. 3	3	Humanities 2	4	Home Ec. 33	2
Humanities 1	4	Home Ec. 2	2	Home Ec. 13	4	Home Ec. 50	2
Home Ec. 1	2	Phys. educ.	1	Home Ec. 18	3	Phys. educ.	1
Home Ec. 4	2			Phys. educ.	1	Physiology 51	4
Phys. educ.	1			Econ. or sociol. or psychology	3		
	11 or 12		11 or 12		15 or 16		12
Electives	4 to 6	Electives	4 to 6	Electives	1 to 3	Electives	4 to 6

SUGGESTED ELECTIVES

Freshmen: Music 77 (2 hrs.), Art 12 (3), language (3); Psychology 1 (3).
Sophomores: Home Econ. 105 (2 Hrs.), 117 (2), 180 (2), 14 (3).

The Curriculum for Teachers

Students who wish to obtain a high-school certificate to teach home economics must meet the requirements of the State Board of Education and of the College of Education. Recommendation for certification is made by the division of home economics to the Dean of the College of Education. For requirements see the bulletin, Regulations Governing Teacher Selection, etc.

The head of the Division of Home Economics in the College of Agriculture, Forestry, and Home Economics is also a member of the College of Education and is the adviser for students wishing to meet the requirements for a high-school certificate to teach home economics.

West Virginia University has been approved by the State Department of Education and by the U. S. Office of Education as qualified to train teachers of vocational homemaking.

All students who meet the requirements for vocational certificates in home economics as set forth in the bulletin, **Regulations Governing Teacher Selection, Guidance, Training, and Certification,** and who maintain an average of "C" or better in Education 163 and 224 will be recommended for vocational certificates.

Students transferring from other institutions should do so not later than the junior year. A minimum residence of the entire senior year is required, and students with irregular schedules will require a longer time.

Major Curricula in Home Economics

THE TEACHING MAJOR

(See Teacher Training Bulletin for course requirements)

RESEARCH IN FOODS AND NUTRITION

Recommended: English 13 (2 hrs.); English 126 (2 or 3); Phys 1 and 3 (4); Physics 2 and 4 (4); Physiol. 51 (4); Chem. 31 (4); Chem. 105 (4); Chem. 106 or 115 (3); Biochem. 239 (4); Math. 3 (4); Math. 4 (2); Math. 5 (4); Math. 107 (4); H. Ec. 107 (3); H. Ec. 218 (2); H. Ec. 251 (2); H. Ec. 252 (3).

TEXTILES AND RETAILING

Recommended: Sociol. 1 (3 hrs.); Econ. 173 (3); Phys. 1 and 3 (4); H. Ec. 134 or 135 (3 or 4); H. Ec. 225 (2); H. Ec. 226 (2); H. Ec. 230 (2); Chem. 5 or 105 (4); Chem. 6 or 106 (3-5); Chem. 31 or 131 (4); Educ. 221 (2); Art 111 (3); Psych. 132 (3); English 126 (2-3). Selected courses in business administration.

NUTRITION AND DIETETICS

Required: Chem. 31 (4 hrs); Biochem. 239 (4); Physiol. 51 (4); H. Ec. 14 (3); H. Ec. 107 (3); H. Ec. 108 (2-4); H. Ec. 111 (2); H. Ec. 217 (2); **Recommended:** Chem. 105 (4); Chem. 106 or 115 (3); H. Ec. 109 (2); H. Ec. 110 (2); H. Ec 113 (3); H. Ec. 218 (2); Econ. 173 (3). (Refer to current A. D. A. requirements.)

DESIGN

Recommended: H. Ec. 117 (2 hrs.); H. Ec. 135 (4); H. Ec. 138 (2); H. Ec. 226 (2); H. Ec. 230 (2); Psych. 132 (3); H. Ec 136 (2); H. Ec. 173 (3); H. Ec. 225 (2); Art 11 or 111 (3); Sociol. 105 (3); Econ. 127 (2); Bus. Adm. 128 (3); Physics 1 and 3 (4).

EXTENSION, HOME SERVICE, AND COMMERCIAL WORK

Recommended: H. Ec. 33 (2 hrs.); H. Ec. 107 (3); H. Ec. 108 (2-4); H. Ec. 120 (2); H. Ec. 240 (2); H. Ec. 252 (3); H. Ec. 254 (3); Econ. 173 (3). **Suggested electives:** Speech 11 (3); Speech 120 (3); H. Ec. 50 (2); H. Ec. 190 (2); H. Ec. 251 (2); Psych. 1 or 3 (3); Pol. Sci. 5 (3); Jour. 112 (2); Mus. 77 (2); Sociol. 3 or 130 (3); Sociol. 105 (3); Educ. 106 (3); Physics 1 and 3 (4). Selected courses in agriculture.

CHILD DEVELOPMENT

Recommended: H. Ec. 50 (2 hrs.); H. Ec. 107 (3); H. Ec. 215 (2); H. Ec. 240 (2); H. Ec. 241 (2); Psych. 1 (3); Psych. 122 (3); Psych. 234 (3); Libr. Sci. 103 (3); Sociol. 210 (3); Psych. 224 (3); Speech 250 (3) and 200 (3); Mus. 77 (1).

COURSES OF INSTRUCTION IN HOME ECONOMICS

Professor NOER; Emeritus Professors COLWELL and NESBITT; Assistant Professors BROWN, DIETRICH, HURST, PALMER, PARIS, PRICE, and WHARTON; Instructors BOGGESS and MCALLISTER

(1) Students in the College of Arts and Sciences who major in home economics must meet the requirements in that college and also the departmental requirements as outlined on page 159.

(2) Students who wish to obtain the high-school certificate to teach home economics must meet the requirements of the State Board of Education, the College of Education, and the Division of Home Economics. The B. S. H. E. degree in the College of Agriculture, Forestry, and Home Economics is planned to allow sufficient elective to meet these requirements.

(3) Students from other colleges who wish to elect home economics courses without meeting the Science requirements may take Home Economics 1, 2, 3, 4, 33, 50, 115, 116, 120, 134 or 135, 138, 240, and 241; others by consent of instructor.

Food and Nutrition

Assistant Professor HURST and Instructor MCALLISTER

1. **Elementary Foods and Nutrition.** I, II. 2 Hrs. Application of principles of human nutrition with particular reference to need of college students. Open to all students. Mrs. Palmer

13. **Food Selection and Preparation.** I, II. 4 Hrs. Two lectures and two laboratories. PR: Chem. 1 and H. E. 1, or consent of instructor. Chemical and physical bases for food preparation with enough experimental work to give an understanding of the reasons for recommended procedures for the preparation of food products of high quality. Demonstrations, discussions, and workshop. Miss McAllister

14. **Meal Planning, Preparation, and Service.** I, II. 3 Hrs. One lecture and one 3-hr. laboratory. PR: H. E. 1 and 13, or consent of instructor. Problems in selection and purchase of foods and the planning, preparing, and serving of meals, including wise use of time and energy. Miss McAllister and Miss Nesbitt

105. **Food Preservation.** I. 2 Hrs. One lecture and one laboratory. PR: H. E. 13 or equivalent. PR or parallel: Bact. 141. Fundamental principles involved in preservation of foods by canning, drying, fermentation, curing, and freezing as applied in the home and in centers equipped for quantity work. Miss McAllister

107. **Nutrition.** I. 3 Hrs. Two lectures and one laboratory. PR: Chem. 2, H. E. 13, and Physiol. 51 or 151, or consent of instructor. Food needs as affected by such factors as age, sex, and activity, nutritive value of common foods, and planning of adequate diets at different cost levels. Mrs. Palmer

113. **Experimental Cookery.** I. 3 Hrs. Two laboratories of 3 hours each.

PR: H. E. 14. Chem. 31. Utensils, ingredients, temperature, manipulation, and cooking methods as they affect quality of cooked products. Offered in alternate years. Miss McAllister

114. Group Feeding. I, II. 1 Hr. (Arr.) PR: H. E. 13. Staff

161. Requirements for Normal Human Nutrition. I, II. 3 Hrs. Lecture and demonstration. Two 2-hour and one 1-hour class per week. For students in other colleges who are interested in nutrition. Miss Hurst

215. Nutrition Work with Children. II. 2 Hrs. PR: H. E. 13, 14, 107. One lecture, one laboratory. Malnutrition among children of elementary-school age. Causes, prevention, and treatment. Planning and preparing luncheons for a group of children; weighing; measuring; checking food habits and making home visits. Miss Hurst

216 Community Nutrition Problems. II. 2 Hrs. Two hours of lecture plus field work. PR: H. E. 13, 14, 215, or consent of instructor. Includes organizations and agencies through which these problems may be solved. Miss Hurst

217. Diet in Disease. II. 2 Hrs. H. E. 14, 107. Adaptations of the normal diet for diseases whose prevention or treatment is largely influenced by diet. Offered in alternate years. Miss Hurst

218 Advanced Nutrition. I. 2 Hrs. Topics discussed will depend somewhat upon needs and interests of students participating. Critical review of current literature and of present researches. PR: physiology (3 hrs.), H. E. 107, or equivalent background. Offered in alternate years.
Miss Hurst

Institution Management

Assistant Professor PRICE

108. Quantity Cookery. I and II. 2-4 Hrs. Application of principles of cookery to preparation of food in large quantity. Use of standardized formulas, calculation of costs, and use of institutional equipment. The Cafeteria is used as laboratory.

109. Institution Accounting. 2 Hrs. Current procedures in accounting for institutions. Preparation of budgets, food-control records, financial statements, and reports.

110. Institution Buying. 2 Hrs. Quantity-food purchasing for institutions. Observation in local wholesale markets and warehouses.

111. Institution Organization and Management. 2 Hrs. Principles of organization and management of institutions of various types. PR: H. E. 108.

112. Laboratory Practice In Institution Management. I, II. 2 Hrs. PR: H. E. 14 and consent of instructor. (Arranged.) Experience under supervision in planning, preparing, and serving food in an institution. Selection of place and type of experience to be determined by needs of students. PR: H. E. 108 and 111.

Textiles and Clothing

Assistant Professor Dietrich

2. **Elementary Clothing.** I, II. 2 Hrs. Problems in selection, purchase, construction, and conservation of clothing.

18. **Intermediate Clothing.** 3 Hrs. Two 3-hr. laboratories. Clothing needs of the family; buying and alteration of ready-made garments. Experience in construction with particular emphasis on pattern adaptation and remodeling.

115. **Clothing Selection.** I, II. 2 Hrs. Two lectures. Selection of clothing for the whole family from the point of view of design, color, and economy. Clothing inventories and buying plans. PR: H. E. 3, H. E. 2, or consent of instructor.

116. **Clothing Techniques.** II. 2 Hrs. Not open to home economics majors. Techniques for simple garment construction, remodeling, alteration, and repair. Problems adapted to needs of individual students. Especially planned for Arts students and young homemakers.

117. **Textiles.** I, II. 2 Hrs. Lecture and laboratory combined. Textile fibers and fabrics studied with a view to their use in dress and in the home. PR: H. E. 2 and 3 or consent of instructor.

120. **Selection and Construction of Clothing.** I, II. 2 Hrs. Two laboratories. Construction of wool and rayon garments. Pattern alteration and adaptation. Making over clothing. PR: H. E. 3, H. E. 2, or consent of instructor.

225. **Advanced Clothing Construction.** II. 2 Hrs. Two 2-hr. laboratories Tailoring, draping on the dress form, coat making, and special finishes PR: H. E. 18, 115, 117, 120, or consent of instructor.

226. **Advanced Textiles.** II. 2 Hrs. Two 2-hr. periods which combine lecture and laboratory. Major textile fibers, and alternates among the lesser-used fibers. Commercial laundry and cleaning establishment. Fur fibers. PR: H. E. 117, chemistry, and Econ. 1 or 173, or their equivalent.

228. **Tailoring. I.** 2 Hrs. PR: H. Ec. 117 and 120. Offered in 1947-48 and alternate years. Miss Stoflet

Applied Arts

Assistant Professor Palmer

3. **Art Applied to Personal Problems.** I, II. 2 Hrs. Study of principles of design intended to help college students meet the problems of daily living. Problems may include room arrangement, clothing design, etc. Miss Palmer

33. **Present-day Housing.** II. 2 Hrs. PR: H. E. 3 or consent of instructor. Factors to be considered in solution of problems of providing housing for the family. Special attention to low-cost living. Planning for the home, cost of furnishing, and maintenance. Laboratory practice in making improvement for rooms, apartments, and housing, using materials commonly found in rural communities and small towns. Miss Palmer

134. **House Decoration.** II. 3 Hrs. for non-majors. One lecture and 2 laboratories. Materials and furnishings that go into decoration of a home, with emphasis on cost, buying, reconditioning, and furnishing. Miss Palmer

135. **Home Planning and Furnishing.** I, II. 4 Hrs. Two lectures and two laboratories. Fundamentals of planning arranged to develop better understanding of house structure and home needs. Discussions on home decorating based on various income levels and suited to various communities and needs. PR: H. E. 3. Miss Palmer

136. **Advanced Home Planning and Furnishing.** II. 2 Hrs. Two laboratories. PR: H. E. 3 and 33 or 135 or consent of instructor. Miss Palmer

138. **Home Crafts.** I, II. 2 Hrs. Two laboratories. Knitting, crocheting, decorative stitchery, leather-tooling, glove-making, children's toys, weaving. Miss Palmer

230. **Costume Design.** I. 2 Hrs. Two laboratories. Techniques of figure and fashion drawing. Problems in designing costumes and ensembles for the individual and other members of the family. Study of historic costumes as it affects present-day fashions. PR: H. E. 3, 18, 117, and 120, or consent of instructor. Staff

Health and Child Care

240. **Child Development.** I, II. 2 Hrs. Two lectures. Study of the child from prenatal period through adolescence. The University Nursery School is used for observing pre-school children—each girl spends 1 or 2 hours a week observing and assisting.

241. **Observation and Participation in Nursery School.** I, II. 1-2 Hrs.

Home Management

Assistant Professor PARIS and STAFF

4. **Management.** I, II. 2 Hrs. Simple problems in the management of time, energy, and other resources. Practical application to problems of individual members of class. Miss Paris and Mrs. Wellen

251. **Mechanics of the House.** I, II. 2 Hrs. Two lectures Work areas of of the house. Kitchen planning and efficiency. Standards in selection of equipment for cleaning and for the kitchen and laundry as they apply to machines, heat, refrigeration, and electricity. Care of equipment PR: 25 hrs. of home economics or consent of instructor. Staff

252. **Home Management Laboratory.** I, II. 3 Hrs Arranged. Emphasis on satisfying family life and social relationships. Approximately 5 weeks of house residence, and 1 hour of discussion each week throughout the semester. PR: 25 to 30 Hrs. of home economics. Miss Paris

254. **Home Management (Economic Problems of the Home).** I, II. 3 Hrs. Three lectures. Economic problems of the American family. Standards of living, budgeting and account keeping, buying problems. Value of household production. Providing for the future. PR: 33, 4, and 13. Miss Paris

Home Economics Education

Professor NOER; Assistant Professor BROWN; Instructor BOGGESS

Ed. 163. Materials and Methods in Home Economics. I, II. 2 Hrs. Miss Boggess

261. Demonstration Techniques. II. 2 Hrs. PR: Minimum of 4 hours in four major areas of field. Miss Paris

Ed. 262. Vocational Home Economics in Secondary Schools. I, II. 2 Hrs. Miss Noer

263. Home Economics Curriculum. II. 2 Hrs. PR: Ten hours in Education. Offered in 1947-48 and alternate years. Staff

265. Selection and Preparation of Illustrative Material for Teaching Home Economics. II. 2 Hrs. Offered in 1947-48 and alternate years. Staff

268. Adult Education in Homemaking. I. 3 Hrs. Current trends and present activities. Organization of adult classes; development of unit outlines; consideration of teaching methods; illustrative material and bibliography. Staff

(*For additional courses, see Summer Session Bulletin*)

General Courses

Professor NOER and STAFF

50. Management in Family Living. II. 2 Hrs. PR: H. E. 4 or consent of instructor. Influence of home conditions on families and family members. In considering ways of meeting every-day problems of families, an attempt will be made to apply the findings of science and the techniques of management in such a way as to help one achieve satisfaction in living. Mrs. Wellen

160. Problems in Home Management and Family Living. I, II. 2 to 4 Hrs. A general course dealing with various phases of family life and home management. Open to juniors and seniors not majoring in home economics. Staff

180. Problems in Home Economics. I and II. 1 to 4 Hrs. Staff

190. Home Nursing. II. 2 Hrs. Staff

270. History of Home Economics. I, II. 1 Hr. One lecture. Miss Noer

280. Problems in Home Economics. I and II 1 to 4 Hrs. Staff

300. Research Methods. I, II, S. 2 Hrs. Adaptation of research techniques to problems in home economics. For students writing problems or theses. Staff

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The College of Arts and Sciences

ORGANIZATION

The University, through its liberal arts college, offers that academic training which is so essential today as a foundation for good citizenship, enlightened leadership, and effective professional or technical training. It puts thoroughness above breadth of offerings. It provides a curriculum rigid enough to conserve the best in the cultural subjects, yet elastic enough to meet the varying talents and aptitudes of individual students.

Present-day standards in business, industry, and the professions are becoming more and more exacting. Increasing emphasis is being placed upon a liberal education as a foundation for technical or professional work. As a consequence, the paths to the professions lead through this college. Preprofessional curricula have been arranged in law (three years), education (two years), medicine (two, three, or four years), dentistry (two, three, or four years), nursing, social work, journalism, and medical technology.

The College of Arts and Sciences includes a lower division and an upper division. The lower division consists of the work of the first and second years, and the upper division consists of the work of the third and fourth years.

The instruction in the College of Arts and Sciences is administered through the following departments:

Art; biology; chemistry; classics; economics and business administration; English language and literature; geology, mineralogy, and geography; Germanic languages and literatures; history; home economics; library science; mathematics; philosophy and psychology; physics; political science; Romance languages and literatures; sociology; social work; and speech.

Two baccalaureate degrees are granted in this College: Bachelor of Arts (A.B.) and Bachelor of Science (B.S.) The Bachelor of Arts degree is conferred upon those who pursue the four years of academic work in the College or upon those who pursue three years of work in this College and one year in either the College of Law or the School of Medicine.[1]

The Bachelor of Science degree is conferred upon those who pursue the combined scientific and medical courses, or special curricula in chemistry, in geology, in business administration, or in social work.[1]

Standing Committees

SCHOLARSHIP and VETERANS' EDUCATION: MESSRS. ASHBURN (chairman), CURTIS, CORE, ROBERTS, STURM, STEWART, and SMITH (secretary).

CURRICULUM COMMITTEE ON GENERAL EDUCATION: MESSRS. CROCKER (chairman), CURTIS, LAZZELL, SPIKER, STRAUSBAUGH, and VEST.

[1]See page 58, "Classification of Students."

Main Objectives

The curriculum of the College of Arts and Sciences has certain main objectives.

1. **General Culture.** The work of the lower division is intended to complete what is usually termed "a general education." It rounds out the program of studies pursued in the high school and promotes the full development of the student (1) as an individual and (2) as a member of society. Ideally, the student should undergo a well-proportioned development intellectually, spiritually, physically, and emotionally. The end of such development should be an inner balance or stability on the basis of which further growth can take place. The development of the individual as a member of society is to be measured in terms of his or her usefulness and sense of responsibility to the social order. The student should develop the capacity for intellectual participation as a citizen in the community, the state, the country, and the world. A general education should, therefore, provide for all students a meaningful experience appropriate to the individual and social needs which all citizens have in common as members of a free society in the contemporary world.

2. **Specific attributes.** Most of the attributes of a general education can be placed in one of three categories: (1) attitudes, (2) areas of knowledge, and (3) skills.

The following attitudes should be attained as the result of a general education:

(1) An attitude of tolerance or open-mindedness, characterized by a cosmopolitan outlook that will enable the student to see beyond the limits of his own profession, his own economic status, and his own country;

(2) An attitude of truth-seeking characterized by scientific objectivity and motivated by intellectual curiosity;

(3) An attitude of intelligent appreciation towards nature and the arts that will, as far as the student's endowments will permit, help him in his aesthetic and ethical choices;

(4) An attitude of dispassionate self-appraisal, based on an understanding of his own nature and characterized by an awareness of his own mental strengths and weaknesses.

The areas of knowledge which should be the common possession of educated persons may be conveniently grouped in two divisions:

(1) A knowledge of man as a social and intellectual being, of his place in contemporary civilization, and of that civilization's place in the history of man;

(2) A knowledge of man as an organism and of man in his relation, direct or indirect, to the biological and physical environment in which he lives.

Three basic skills are regarded as indispensable to all educated persons:

(1) That of self-expression or communication, involving writing, speaking, reading, and listening;

(2) That of calculation, i. e., a knowledge of, and some skill in, basic mathematics.

(3) A familiarity with at least one foreign language, not only as a useful skill, but also as a means of promoting tolerance and sympathetic understanding of peoples who do not speak our language.

Courses Recommended

Two types of courses are recommended to all students in the lower division as common means for fostering the attributes of mind and character which a general education should develop in the student:

(1) Courses for the promotion of basic skills: (a) calculation and (b) communication;

(2) General introductory courses for the elementary but organically integrated study of four fields of human knowledge: (a) Biological Science, (b) Social Science, (c) Physical Science, and (d) Humanities.

Opportunity for Specialization

The work of the upper division is intended to provide intensive study in one or two fields of knowledge. It is based on the belief that an educated man or woman should not only know the fundamentals of several branches of study but should have a rather thorough knowledge of some selected field. In the upper disivion, therefore, the student concentrates on a major and one or two minors. The curriculum is sufficiently flexible, however, to meet the needs and tastes of individual students without at the same time exposing the student to the disadvantages of a free elective system.

Special Provisions for the Junior Certificate

Experience has shown that students whose average in high-school subjects was below 75 percent, or students who ranked in the lowest one-fourth of the high-school graduating class, probably will not succeed in the regular college curriculum. Nevertheless, such students may, by wise selection of studies, profitably spend one or two years in college. Other students for financial or other reasons may not be able to attend college for more than one or two years. It is believed that students in either group may spend their time more profitably taking courses in which they are particularly interested from a cultural or vocational point of view than by following the curriculum leading to the A. B. degree. Students who are not candidates for the A. B. degree but who earn 64 hours of college credit and 64 honor points, including general University requirements, in residence in this college will be awarded the Junior Certificate of the College of Arts and Sciences.

Advisers

Lower Division. Each student in the lower division is assigned to an adviser who will assist in registration and who will have general supervision over the work of the student. Electives are chosen and changes in the program are made with the approval of the adviser. Students are urged to confer with advisers in respect to any difficulties or mal-adjustments in college life.

Upper Division. Each student in the upper division is assigned to an adviser of the department to which the major subject belongs. The program of study and all changes in class assignments must be approved by the adviser.

The Major Subject

In the upper division the student concentrates on a major and one or two minor subjects selected from the following list of subjects:

French	Business	Art
Geology	English	Biology
Chemistry	German	Botany
Classics	History	Economics
Physics	Speech	Home Economics
Political Science	Zoology	Library Science
Psychology	Sociology	Mathematics
Social Work	Spanish	Philosophy

REQUIREMENTS FOR DEGREES

General Requirements for All Degrees

Foreign Language. Fewer than 6 hours in an ancient or modern language will not be counted towards any degree, diploma, or certificate in this College unless work in the same language has been offered for entrance.

Electives. At least 6 hours must be taken in each subject as an elective, but no more than 9 hours in isolated courses of less than 6 hours each, selected with the approval of the adviser, may be offered.

In addition to the regular elective work in the College of Arts and Sciences which is offered by the faculties in other colleges, work not to exceed 15 hours in the College of Law, the College of Agriculture,[1] the College of Engineering and the School of Mines,[2] the School of Music,[3] the School of Physical Education and Athletics,[4] the School of Journalism, or 12 hours of upper-

[1]In addition to the 15 hours, the following courses in agriculture are regular electives in the College of Arts and Sciences: Farm Economics 131 and all courses in entomology, genetics, and plant pathology. (See the special curriculum for the A. B. and B. S. in Agriculture.)

[2]The engineering and mining electives include Chemical Engineering 101, 202, 205, 206, 210, 220, and 221; Civil Engineering 1, 2, 3, 110, and 115; Electrical Engineering 100, 102, 103; Mechanical Engineering 20, 24, 26, 29, 221, and 222; Mechanics 101, 102, 103, and 104; and Mining Engineering 106, 202, 203, and 204. In addition the student may elect with the consent of his adviser, when his major is Physics, Mechanical Engineering 101 to 107 (10 hrs.); and Ch. E. 100s and 235s (4 hrs.).

[3]The music electives include Theory of Music 1, 2, 3, 4, 72, 79, 109 to 118, 180 to 183, 240, 241, and 281; Ensemble 153 to 156; classes in orchestra instruments 191 to 196; Men's Glee Club, Women's Glee Club, and University and Community Orchestra; and piano or voice or violin or pipe organ or band and orchestra instruments.

[4]The electives in physical education are: P. E. 77, 151, 167, 277, and Safety Education 281.

division work in Military Science and Tactics, or 20 hours in the College of Education, may be included in the list of elective credits offered by students in the College of Arts and Sciences. The total number of hours elected from other colleges shall not, however, exceed 24 hours in all.

The course in general biochemestry is available (without additional fees) in the School of Medicine.

Major Subject. The maximum amount of credit allowed in any one department is ordinarily 40 hours. Exceptional cases involving extension of hours in the major must have the previous approval of the Scholarship Committee.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

The Bachelor of Arts degree in the College of Arts and Sciences is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance, college, and departmental requirements, and completes any one of the following courses of study:

A. Regular course (128 hours)
B. Pre-Medical course (128 hours)
C. Combined courses:
   (a) Arts and Law (124 hours)
   (b) Arts and Medicine (128 hours)

Students transferring to West Virginia University from other institutions should ordinarily do so not later than the beginning of the third year. Such students must meet all the requirements of the lower division. All deficiencies must be met as soon as possible after admission to this College, whereupon such student may register regularly in the upper division.

Maximum and Minimum Work. A student who has made an average the preceding semester of "B" or better while carrying at least 16 hours may enroll for a maximum of 19 hours without petitioning the Scholarship Committee. A student who has made an average in the preceding semester of "C" or better while carrying at least 16 hours may without petitioning enroll for a maximum of 18 hours, 36 hours for the year, provided that no more than 34 hours are academic work.

Note

In the following departmental curricula the number of the course is indicated in bold face type. The figure in the parentheses immediately following refers to the value in semester credit hours offered for the course.

A. Regular Course (128 Hours)

Four Years in the College of Arts and Sciences

Lower-division Curriculum

(a) **General University Requirements.**
Military science[1]—6 hours.
Physical education (men)[2]—2 hours.
Physical education (women)[2]—4 hours.

(b) **Science.** At least 8 hours of a laboratory science chosen from the following list: botany, chemistry, geology, physics, zoology, biology, psychology, physical science.

(c) **Foreign language.** To be eligible for graduation a student must have completed twelve semester hours in a foreign language in college or two units for entrance and six hours in the same language in college.

(d) **English composition.** Ordinarily 6 hours of English composition (English 1 and 2) will be required of all freshmen. In case a freshman is not qualified to meet the requirements in English 1, as shown by placement or other tests, he (or she) will be assigned to English 1C, which carries 3 hours of University credit. Upon the successful completion of the work in English 1C the student will register for the regular work in English 1.

(e) **Additional.** At least 6 hours in each of three of the following:
(1) English (additional to d), or speech.
(2) Foreign language (additional to c).
(3) Mathematics.
(4) History.
(5) Political science.
(6) Economics or sociology.
(7) Philosophy and psychology.
(8) Home economics.
(9) Science (additional to b).
(10) General introductory courses.
(11) Art.
(12) Speech.

(f) **Electives,** under the supervision of the adviser, to make a total of 64 hours. Ordinarily freshmen should register for required courses. Electives should be used in the second year chiefly in meeting the preliminary requirements of the departments in which students expect to do the work of the major (or minors) in the upper division.

[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work, and all who have credit for 6 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular examination card is filed in the Registrar's office.

[2]Two hours of physical education for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

Upper-division Curriculum

1. **A major sequence** of 18 to 24 hours of upper-division courses, preceded by the proper lower-division courses prescribed as preparation for the major. This work should represent a coherent and progressive sequence of courses as outlined in the departmental announcements. The major subject will be selected when the student registers in the upper division, but the student must plan the work in the lower division in such a way as will meet the departmental requirements for the major and minor.
2. **A minor sequence** of 9 to 12 hours of upper-division courses, preceded by the proper lower-division courses, in some department closely related to the major department. At the option of the major department, a second minor of 6 hours may be required in a second department closely related to the major department.
3. **Electives,** under the supervision of the departmental adviser, to make a total of 128 hours.[1] At least 52 of the 64 hours in the upper division must be selected from upper-division courses.[3] A departmental adviser may permit a student in the upper division to elect lower-division courses to an amount not exceeding 12 hours when such action will be an advantage to the student in connection with the major or minor sequence, but honor points will count only at the rate of 1 honor point per credit hour.

B. Pre-Medical Curricula[2]

The following sequence of courses is worked out for the general guidance of students who are preparing for the study of Medicine. It includes all the required subjects. While the pre-medical student is meeting the minimum requirements of the School of Medicine as stated in the General Catalogue, the medical faculty prefers that he use his elective hours to secure a broad, general training rather than to secure a large number of credits in any one special field. Leading medical educators in the United States today also are definitely in favor of a good general training rather than extensive specialization in the so-called pre-medical sciences.

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 13 or English 3	2 or 3	English 14 or English 4	2 or 3
Chemistry 3	4	Chemistry 4	4	Physics 1 & 3	4	Physics 2 & 4	4
Biology 1 or Zoology 1	4	Zoology 2	4	Chemistry 5	4	Chemistry 15	3
Modern lang. or Latin	3	Modern lang. or Latin	3	Zoology, or math.,* or Psychol. 1, or cultural group†	3	Zoology, or Math. 10*, or Psychol. 1, or cultural group†	3
Mil. sci.	1	Mil. sci.	1	Modern lang.	3	Modern lang.	3
Phys. educ.	1	Phys. educ.	1	Mil. sci.	2	Mil. sci.	2
	16		16		17 or 18		16 or 17

[1] A student may decrease the total number of hours required for graduation by doing work of superior quality. For details of this plan see page 56.

[2] A specific statement concerning entrance requirements to the School of Medicine will be found on page 45.

[3] A candidate for the B. S. in Chemistry should present 56 hours in upper-division courses.

THIRD YEAR

First Sem.	*Hrs.*
Chemistry 163 and	3
Chemistry 136	6
Zoology 231*	4
Zoology group, or mathematics, or Psychology 101	3
Cultural group†	12
Related science group‡ or modern language	4 to 6
	32 or 34

FOURTH YEAR

Second Sem.	*Hrs.*
Chemistry group	2 to 6
Zoology group (including 231)*	2 to 6
Cultural group†	12
Related science group‡	6
Modern language group or electives as needed to complete hours required for graduation.	

C. Combined Courses

ARTS AND MEDICINE

Course A. Students receive the Bachelor of Arts Degree upon the completion of four years of pre-medical work (128 hours), and the Bachelor of Science Degree at the completion of two years of medicine.

Course B. Students who enter the School of Medicine after the completion of the first three years (90 hours exclusive of military and physical education) of the pre-medical curriculum receive the Bachelor of Arts degree upon the completion of the first year of medicine, and the Bachelor of Science degree upon the completion of the second year of medicine.

Students who are working toward the combined A. B. degree described in Course B above while taking the courses in the School of Medicine must also be registered in the College of Arts and Sciences.

Modern Foreign Language Requirements:

Course A requires a reading knowledge of both French and German, with a minimum requirement of 18 hours. Course B requires a reading knowledge of either German or French, with a requirement of 12 hours, which may be divided between the two languages by students who present two units of either language for entrance.

D. Pre-Dental Courses

The following courses are planned for students preparing for the study of dentistry. In case a student expects to enter a certain school of dentistry these courses may be changed to suit his needs.

*Recommendations — Many medical schools require or recommend 6 hours of mathematics; some recommend that Zoology 231 (Comparative Anatomy) and courses in chemistry be taken the year before entering medical school; many require and many recommend a knowledge of Latin. The schedule provides for all these requirements and recommendations.

†Cultural group — To be chosen from English, humanities, economics, sociology, history, political science, philosophy, speech, foreign language, education, music.

‡Related science group — To be chosen from biology, botany, physics, mathematics, geology, psychology, genetics, pharmacy, physiology.

[2]A specific statement concerning entrance requirements to the School of Medicine will be found on page 45.

(1) TWO-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance two years of pre-dental work. This course has, in addition to the minimum requirements, certain courses of general cultural value.

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Physics 1 & 3	4	Physics 2 & 4	4
Chemistry 3	4	Chemistry 4	4	Chemistry 15	3	Chemistry 36	6
Biology 1	4	Zoology 3	4	and		Psychol. 1 or	
German		German or		Chemistry 63	3	Zoology 210	3
or French	3	French	3	Psychol. 1 or	3	German, French,	
Mil. sci.	1	Mil. sci.	1	Zoology 231	4	or English 4	3
Phys. educ.	1	Phys. educ.	1	German, French		Mil sci.	2
	16		16	or English 3	3		18
				Mil. sci.	2		
					18 or 19		

(2) THREE-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance three years of pe-dental work. The first two years (60 hours) of this course are identical with course B except that, during the second year, French or German is taken. Students who enter an approved school of dentistry after completion of this course (90 hours exclusive of military and physical education) receive the Bachelor of Arts degree upon completion of the first year of dentistry, provided their applications receive approval by the Scholarship Committee.

THIRD YEAR: English 3 (3 hrs.) and 4 (3); economics or sociology or history or political science or modern language (18); Chemistry 107 (2) and 238 (5); physics or psychology or elective (3). Total, 34 hrs.

(3) FOUR-YEAR COURSE

A course preparing for schools of dentistry requiring for entrance four years of pre-dental work. On completion of this course (128 hours) students receive the Bachelor of Arts degree. The first three years of this course are identical with Course 2.

FOURTH YEAR: chemistry group (2-6); zoology group (2-6); cultural group (12); related-science group (6); modern-language group or electives as needed to complete the 128 hours for graduation.

(E) A Second Bachelor's Degree

A student who has received a bachelor's degree in one department or college of West Virginia University may become eligible for a second bachelor's degree by earning an additional 30 semester hours in residence in the College of Arts and Sciences and meeting all requirements, departmental and otherwise, of the second bachelor's degree.

PRE-PROFESSIONAL COURSES

Not leading to degrees in the College of Arts and Sciences

(A) Pre-Nursing Curriculum

The following arrangement of courses is worked out for the general guidance of students who are preparing for the profession of nursing. This curriculum includes all subjects generally required by professional schools of nursing. The tendency in nursing education is toward establishment of a requirement of at least two years of college work preparatory to entering a school of nursing. Students are advised to use their elective hours in the direction of a broad, general education and, if possible, to complete the requirements for the A. B. degree.

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Chemistry 3	4	Chemistry 4	4
Zoology 1	4	Zoology 2	4
Lang. or elective	3	Lang. or elective	3
Phys. educ.	1	Phys. educ.	1
		Elective	3
	15		15 to 18

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English Lit.	3	English Lit.	3
Lang. or elective	3	Lang. or elective	3
Sociology 1	3	Sociology 3	3
Psychology 1	3	Psychology 10	3
Phys. educ.	1	Phys. educ.	1
Elective	3	Elective	5
	16		18

THIRD AND FOURTH YEARS

Students are advised to select psychology, sociology, or zoology as a major subject and one other subject in this group as a minor. If possible the student should select the school of nursing which she proposes to enter and use her electives in meeting pre-professional requirements or recommendations of that particular school.

(B) Pre-Professional Social Work

An undergraduate pre-professional social-work curriculum for juniors and seniors is available in the Department of Social Work.[1] The purpose of this curriculum is primarily to prepare students for admission to the graduate professional program in the Department of Social Work or to other graduate schools of social work, to qualify students for positions in social agencies for which graduate professional education is not now required, and to provide understanding of social work for these students who desire it as a part of their general education.

(C) Pre-Education

Candidates for the degree of Bachelor of Science in Education are registered in the College of Arts and Sciences until they have completed 58 hours or more of academic work in the lower division of the College, with an honor-point average of 1.0. They are then transferred to the College of Education. During

[1]For a detailed statement concerning the undergraduate social-work program see pages 190 and 191.

the Pre-Education period students are advised to complete as many as possible of the general courses required by the College of Education and for State certification, as shown in the bulletin, Requirements Applicable to Degrees and to Teacher Certification.

In addition to the above general academic requirements students are advised to complete as many as possible of the required academic courses in two teaching fields.

Upon the successful completion of the entire 64 hours of work in the lower division, Pre-Education students are eligible for the Junior Certificate of the College of Arts and Sciences.

TEACHING CERTIFICATES

The College of Education is authorized by the Board of Governors to recommend all applicants for teaching certificates.

Teaching certificates may be obtained by students registered in the College of Arts and Sciences as well as in the College of Education, provided they meet the requirements for teaching subjects.

For specific requirements in regard to certification see the Bulletin on Teacher Certification Regulations.

Candidates for the A. B. degree who wish to qualify for teaching certificates should indicate this fact to their adviser and plan their entire course with this in view. Unless this is done by the end of the freshman year, students may encounter difficulties in qualifying for the certificate by the time they receive the degree. As a check, consultation with Prof. Elizabeth M. Stalnaker, the adviser of Pre-Education students, should be had each semester.

(D) Pre-Journalism Curriculum

Candidates for the degree of Bachelor of Science in Journalism are registered in the College of Arts and Sciences until they have earned at least 58 semester hours of college credit. During the freshman and sophomore years they should have completed all or most courses specified for pre-journalism majors.

A pre-journalism student who has not maintained at least a C average in all his college subjects during his first two years is strongly advised not to enroll in the professional school. If his average grade in English 1 and English 2 was less than B, he should register for English 13 during his sophomore year. Before or soon after entering the University a student planning to become a journalism major should learn the touch system of typewriting. Since shorthand is of great practical value and frequently aids a graduate in obtaining a position, all students, especially those expecting to become assistants to executives, are urged to learn it before coming to college or during their freshman or sophomore year.

The recommended pre-journalism curriculum follows:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	Newspaper		Newspaper	
History 1	3	History 2	3	Reporting	3	Reporting	3
Science	4	Science	4	History 52	3	History 53	3
Foreign lang.	3	Foreign lang.	3	Foreign lang. or		Foreign lang. or	
Phys. educ.	1	Introduction to		English 5*	3	English 4*	3
Mil. sci. (men)	2	U. S. Journal-		Economics 1	3	Economics 2	3
Electives	1 to 3	ism	1	Psychology 1†	3	Polit. Sci. 5	3
		Phys. educ.	1	Mil. sci. (men)	2	Mil. sci. (men)	2
		Mil. sci. (men)	2	Phys. educ.		Phys. educ.	
		Elective	0 to 2	(women)	1	(women)	1
				Electives‡	0 to 7	Electives‡	0 to 4
16 to 17		16 to 17		16 to 17		16 to 17	

(E) Arts and Law

Three years (96 hours) in the College of Arts and Sciences, and one year (28 hours) in the College of Law

A pre-legal course has two main objectives. The first is to enable the student to acquire a general cultural background, which is in harmony with the chief purpose of the College of Arts and Sciences. The second is to help the student to secure a more specialized background for the legal course that is to follow.

In nearly all cases these objectives can be attained more effectively by taking the regular four-year Arts and Sciences course, during the last two years of which the student may choose his major and minor with particular reference to his legal work. In addition to securing the Bachelor of Arts degree, it will qualify him for admission to almost any law school.

To enable students to receive the degree of Bachelor of Arts and Bachelor of Laws in a shorter period of time, a special course has been arranged by which the student may complete the required studies in the College of Arts and Sciences in three years and, after passing the entire first year of work in the College of Law, be awarded the degree of Bachelor of Arts. This course satisfies the entrance requirements to the College of Law but permits less freedom in choosing electives. All pre-legal students who did not make an average of B or better in English 1 and 2 are required to take English 13 and 14, two courses with certain sections designed especially for pre-legal students. The student should confer with the pre-law adviser as soon as he enters the University. The following schedule is suggested as being adapted to the above course:

*Majors unable to schedule English 4 and English 5 in their sophomore year will be required to take them in their junior year.

†A sophomore expecting to become a high-school teacher will choose an elective in his intended teaching field as a substitute for Psychology 1 and in his junior year will take Education 106, Educational Psychology.

‡Because of the growing demand for graduates trained for advertising promotion, circulation, and other positions in the business department of newspapers, sophomores are permitted to elect Jour. 110, "Newspaper Typography," or Jour. 113, "Principles of Advertising," or both, for the first semester if their schedules will permit. Because of the increasing public interest in radio journalism, sophomores may elect Jour. 122, "Elements of Radio Journalism", provided their schedules will permit.

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Botany, chemistry, psychol., geology, physics, zoology, physical science, or biology	4	Botany, chemistry, psychol., geology, physics, zoology, physical science, or biology	4
French, German, or Latin[1]	3	French, German, or Latin[1]	3
History 1 or	3	History 2 or	3
Humanities 1	4	Humanities 2	4
Mil. sci.	1	Mil. sci.	1
Phys. educ.	1	Phys. educ.	1
	15 or 16		15 or 16

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 13	2	English 14	2
Language	3	Language	3
History 52	3	History 53	3
Polit. Science 5	3	Polit. Science 6	3
Electives (lower-division courses should be taken in the departments in which the student may wish to do upper-division work)		Electives	
Mil. sci.	2	Mil. sci.	2

THIRD YEAR

Pre-law major (upper-division work)	12
Pre-law minor (upper-division work)	9
Electives	9 to 15
	32 or more hours

FOURTH YEAR

28 hrs. in the College of Law

(F) Curriculum for the Degrees A. B. and B. S. in Agriculture

Students who desire a broader training than that furnished in the curriculum leading to the degree in agriculture are reminded that, by proper arrangement of their courses, they may obtain both degrees in five years. Such students will normally take the degree in the College of Arts and Sciences first, usually with major work in the field of biology. Several courses given in the College of Agriculture and required for the degree in agriculture are accepted as regular electives in the College of Arts and Sciences; in addition to these the student is permitted to elect fifteen semester hours from courses in colleges other than the College of Arts and Sciences; these may all be taken in the College of Agriculture. A suggestive list of courses, most of which should be taken during the first four years, follows:

Chemistry 3, 4, and 31 or 36; (a) Biology 1 and Botany 4 and Zoology 3; or (b) Botany 1 and 2 and Zoology 1 and 2; Physics 1, 2, 3, and 4; Economics 1 (or Economics 1 and Agricultural Economics 2); Geology 1; Bacteriology 141; Entomology 2 (possibly 103 or 204 in addition); Genetics 111 and 112 or 221; Plant Pathology 103 or 201; Animal Pathology 102 (possibly 206 also); Animal Husbandry 2, 203; Agronomy 2 (Soils).

Also 15 hours from the following group; more if possible:

Poultry 1; Agronomy 1; Horticulture 1; Dairy Husbandry 1; Animal Husbandry 102.

[1]Latin 1 and 2 are recommended for students not having entrance credit of 2 units in this subject.

In many of the organizations which employ men trained in agriculture the broader training suggested should give the student much greater prospect of employment. He should, of course, have the necessary agricultural background of a certain period of residence on a farm; the student who does not have this will be required, as are all candidates for the degree in agriculture, to satisfy the faculty of the College that he qualifies in this regard.

The specific course requirements and the group requirements as well as major and minor departmental requirements in the College of Arts and Sciences must be satisfied.

(G) Curriculum in Medical Technology

During the first two years the student is registered in the College of Arts and Sciences.

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 1	4	Chemistry 2	4
Zoology 1	4	Zoology 2	4
English 1	3	English 2	3
Modern lang.	3	Modern lang.	3
Electives	2	Electives	2
Physical educ.	1	Physical educ.	1
Mil. sci.	1	Mil. sci.	1
	18		18

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Chemistry 5	4	Chemistry 15	4
English 3	3	English 4	3
Modern lang.	3	Modern lang.	3
Physics 1 & 3	4	Physics 2 & 4	4
Electives	2	Electives	2
Physical educ. (women)	1	Physical educ.	1
Mil. sci.	2	Mil. sci.	2
	19		19

During the last two years the student is under the jurisdiction of the School of Medicine.

THIRD YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Bacteriol. 220	5	Physiol. 141	4
Organic Chem. 131	4	Biochem. 139	4
Zoology 231	4	Parasitol. 120	3
Electives	4	Pathology 151	4
	17	Electives	2
			17

FOURTH YEAR

Continuous courses throughout 12 months. Practical work in laboratories.

	Hrs.		*Hrs.*
Applied Bacteriol. 101	4	Metabolimetry 106	2
Applied Parasitology 102	2	Microtechnique 107	3
Applied Serology 103	4	Normal Hematology 108	4
Clinical Chem. 104	3	Special Hematology 109	3
Electrocardiography 105	2	Keeping Records 110	2
		Urine Analysis 111	5

VETERANS' EDUCATION

The Coordinated Program for Veterans of World War II

The College of Arts and Sciences, in accepting its responsibilities to the men and women in the Armed Forces, has planned for veterans* a coordinated program which conforms in general to the recommendations of the American Council on Education, the Armed Forces Institute, and the West Virginia State Board of Education. Accordingly this program, designed to meet the specific needs of veterans, provides for individual guidance and for appropriate educational placement based upon records of achievement, special abilities, and interests.

Registration

The Official Report and a record of high-school and college work, if any, should, if possible, be in the hands of the Registrar not less than three weeks before registration day.

Advanced Standing

In addition to credit granted for work certified by the Armed Forces Institute or by colleges, the student may, upon application to the Admissions Committee, receive advanced standing in any course regularly offered in the University for which he can pass a proficiency test.

Special Students

Veterans not interested in working for a degree may take any combination of courses for which they are qualified by registering as Special Students.

Refresher Courses

Returning veterans will not be segregated, but will become members of regular classes. However, if in some cases review or preparatory courses are needed to enable them to enter regular classes, such courses will be offered.

The Curriculum Committee on Veterans' Education

To implement this program the Curriculum Committee on Veterans' Education, appointed by the Dean of the College, is empowered, in dealing with veterans, to:

1. Grant a maximum of 8 semester hours' credit in basic military science and physical education service program to those who present evidence of having completed successfully the basic training courses in the Armed Forces. No additional work in military science or physical education will be required.
2. Allow additional credit in advanced military science and/or other specific subjects for training in officer or special technical schools.
3. Accept correspondence work done with duly accredited institutions of higher learning cooperating with the Armed Forces Institute for the amount of credit allowed by the institution with which the credit was earned.

*For purposes of administration the term VETERANS refers to all former members of the Armed Forces—Army and Navy; WACS, WAVES, SPARS—and will also be construed to include former members of the Merchant Marine.

4. Follow the regular policy of the American Council on Education in determining and recording credits for the Army specialized and Navy college-training programs.

5. Grant additional credits on the basis of tests administered or supplied by the Armed Forces Institute.

6. Approve courses of study, prepared by students in consultation with their advisers, when such courses of study require modification or elimination advisable, the admission of those who have not completed high school. of certain requirements for the degree being sought.

7. Authorize, upon the basis of such tests as the Committee may deem advisable, the admission of those who have not completed high school.

THE COURSES OF INSTRUCTION

The General Introductory Courses

The four general introductory courses, which cut across departmental lines, are designed to give the student a broad general education. They are recommended especially for those students who have not yet chosen a field of specialization. They will also be found useful in providing a general knowledge of subjects not covered by the student's field of major interest and in providing a broader perspective for later concentration in certain fields. These courses may be taken by any lower-division student in the College of Arts and Sciences or, with the consent of the dean or adviser, by students in other colleges or schools of the University. The courses are also open to upper-division students, but such students may count honor points only at the rate of one honor point per credit hour.

I. THE HUMANITIES

1, 2. Introductory General Course. I and II. 4 Hrs. per semester.

This course is designed to bring to the student's attention cross-sections of his civilization at those points where its development has been most significant. In accordance with this aim a substantial part of the course is its background of history, to which are added a survey of world literature, enough philosophy to acquaint the student with the principal thought patterns employed by Western man, the main developments in art and architecture, and some music.

The assigned readings constitute the most important features of the course, in that they supply most of the factual material. Lectures are primarily for the purpose of orientation—to help the student interpret the reading. Lectures on art, architecture, and music are illustrated. Weekly discussion periods are also an important part of the course. In them students meet in small groups with an instructor, and an effort is made to help them understand the relation of the past to present-day problems. Through the aid of a syllabus, the course is shown in perspective in order that it may be better conceived as a whole.

112. The Mediaeval Synthesis. 3 Hrs. II. Presentation of the organic unity of mediaeval civilization as exemplified in literature, art, theology.

and society. Emphasis will also be placed on the contributions of the Byzantine and Moslem Worlds to that unity. Illustrative material will include readings in the religious and secular works of the period, reproductions of mediaeval art and architecture and music.

Mr. Battles, Mr. Easton, and Mr. Patton

181. 182. American Civilization. I and II. 4 Hrs. per semester.

This course is designed to acquaint the student with the salient characteristics of American Civilization as they have developed since the planting of European colonies on this continent. Emphasis is placed on the unique contributions of successive arrivals on American shores to the making of a distinctive American culture. A central theme of the course is the manifestation of the democratic spirit in the achievements in thought and feeling of the American people.

This course is open to upped-division students in the College of Arts and Sciences or, with the consent of their dean or adviser, to upper-division students in other colleges or schools of the University. Staff

II. THE SOCIAL SCIENCES

1, 2. Introductory General Course. I and II. 3 Hrs. per semester.

The general course in the social sciences is designed primarily for sophomores and is intended to give the student an understanding of the society in which he lives, with some indication of political, social, and economic trends which may alter this society in the future. It is based upon a plan of two lectures and one discussion period each week. At the discussion periods the content of the lectures for the week will be carefully analyzed, and concrete illustrations of principles expressed in the lectures will be studied.

For each lecture there will be certain required readings and a list of optional readings for students who desire to learn more about certain questions

III. THE BIOLOGICAL SCIENCES

1, 2. Introductory General Course. I and II. 4 Hrs. per semester.

The Introductory General Course in the Biological Sciences is designed to give the student an understanding of the nature and use of scientific method; a general acquaintance with living organisms, their organization, and functions; and to present a brief survey of the animal and plant kingdoms, including their relationships to one another and to their physical environment. Staff

IV. THE PHYSICAL SCIENCES

1, 2. Introductory General Course. I and II. 4 Hrs. per semester.

The Introductory Course in the Physical Sciences is intended to acquaint the student with the physical world in which he lives and has two main objectives: (1) to serve as an orientation course for those students who have not chosen their major field of interest, and (2) to present a broad general view of the physical sciences to students whose interests lie on other fields.

The course carries four credit hours for each of two semesters. Two periods each week are devoted to formal lectures and desk demonstrations; one period a week is used for discusssion and quiz in small groups; and one period a week is devoted to laboratory demonstrations, museum displays, and field trips. Motion-picture films are used in connection with certain phases of the course. The syllabus is designed to give a general view of the whole

field of the physical sciences as well as serve as a guide, for weekly lectures, readings and discussions. Staff

Art

Associate Professor PATTON; Instructors KING and AULL

The Department of Art offers technical courses in drawing, painting, and design; a nontechnical course in appreciation; and lecture courses in the history of the arts. Effort is made to provide for the needs of those interested in the cultural aspects of the arts, to meet the requirements of students planning further work of a technical nature, and to enable students in Education to meet the requirements for certification as art teachers.

For art majors the following lower-division program is recommended:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 3	3	English 4	3
Foreign lang.	3	Foreign lang.	3	Foreign lang.	3	Foreign lang.	3
Laboratory sci.	4	Laboratory sci.	4	Humanities 1	4	Humanities 2	4
Art 11	3	Art 12	3	Art 113	3	Art 114	3
Mil. sci.	1	Art 30	3	Mil. sci.	2	Mil. sci.	2
Physical educ.	1	Mil. sci.	1	Physical educ.	1	Physical educ.	1
		Physical educ.	1	Elective	2	Elective	2
	15		18		18		18

COURSES OF INSTRUCTION

11 or 111, 12 or 112. Representation. I, II. 3 Hrs. per semester. Freehand drawing in pencil and charcoal. Staff

15 ro 115. Representation. I, II. 2 Hrs. Scientific drawing. Freehand drawing primarily for premedical and predental students. Staff

30 or 130. Appreciation of the Arts. I or II. 3 Hrs. Increasing the student's understanding and enjoyment of the arts: analytical study of selected examples of painting, sculpture, and architecture together with sufficient illustrations from music and poetry to make clear basic unity of arts. Mr. Patton, Mr. Manning, Mr. Anderson

105, 106. Survey of Art. I, II. 3 Hrs. per semester. History of art from prehistoric times to the present Offered 1949-50 and alternate years. Mr. Patton

109. Art of the Renaissance. I. 3 Hrs. Offered 1948-49 and alternate years. Mr. Patton

110. Modern Art. II. 3 Hrs. Offered 1948-49 and alternate years. Mr. Patton

113, 114. Representation. I., II. 3 Hrs. per semester. Painting. PR: Art 11, 12. Mr. Patton and Miss King

117, 118. Representation. I, II. 3 Hrs. per semester. Painting. PR: Art 113, 114. Mr. Patton and Miss King

120. Representation. I or II. 2 Hrs. Figure drawing. Study of the construction of the figure. Drawing from the draped model. PR: Art 11, 12. or consent of instructor. Staff

121, 122. Fundamentals of Design. I, II. 3 Hrs. per semester. Mr. Patton

123. Lettering. I or II. 2 Hrs. Principles of design involved in lettering and their application. Mr. Patton

124. **Pictorial Structure.** I or II. 1 Hr. Comprehensive study of picture elements. PR: Registration in painting or consent of instructor. Miss King

126. **Modeling.** I, II. 2 Hrs. Introductory course in sculpture. PR: Consent of instructor. Mrs. Aull

127. **Crafts.** I or II. 2 Hrs. Crafts in their relation to the art program in the secondary school and to recreation programs. Staff

151, 152. **Special Problems.** I, II. 3 Hrs. per semester. Staff

Biology

Professors STRAUSBAUGH, SPANGLER, TAYLOR, GRIBBLE, and CORE; Associate Professors AMMONS and ANDERSON; Assistant Professors MARGOLIN and RITCHIE; Instructor JONES

151, 152. **Specail Problems.** 1, II. 3 Hrs. per semester. Staff

Students may select biology, botany, or zoology as their major subject. Biology 1 and 2 will be required of students who wish to major in either biology or botany. Either Biology 1 and 2 or Zoology 1 and 2 will be required of students who elect to major in zoology. Combinations of general courses in biology and botany or zoology will not be permitted.

Prospective majors in either botany or zoology should include in their schedule of lower-division work Chemistry 1 and 2.

By permission of his adviser the student may select courses offered in other colleges and schools of the University, in partial fulfillment of the requirements for a major.

The following suggested curricula are not to be regarded as specific requirements but will serve as a guide in selection of subjects:

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN BIOLOGY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Biol. 1 and 2	8	Foreign lang.	6	Bact. 141	4	Biol. 291-292	2
English	6	Mil. sci.	4	Biol. 210	3	Zool. 151	4
Foreign lang.	6	Syst. Bot.	4	Genetics 221	3	Biol. 218	3
Gen. Intro. Courses in the Humanities 1 and 2	8	Gen. Intro. Courses in the Physical Sciences 1 and 2	8	Zool. 236 or 237	3	Zool. 235	4
Physical educ.	2	Gen. Intro. Courses in the Social Sciences 1 and 2	8	Botany 213	3	Electives	19
Military sci.	2	Zoology 16	2	Biology 207	1		
				Electives	12		
	32		32		32		32

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN BOTANY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Biol. 1 and 2	8	Foreign lang.	6	Bot. 211, 212	8	Botany 221	4
English	6	Physics 1 and 2	6	Botany 213	3	Botany 230	6
Foreign lang.	6	Syst. Bot.	4	Botany 131	4	Botany 234	4
Chem. 1 and 2	8	Physics 3 and 4	2	Biology 210	3	Biology 218	3
Physical educ.	2	Electives	10	Genetics 221	3	Biol. Seminar	2
Mil. sci.	2	Mil. sci.	4	Bacteriology 141	4	Botany 238	2
				Electives	8	Electives	11
	32		32		33		32

SUGGESTED CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN ZOOLOGY

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Zool. 1 and 2 or		Foreign lang.	6	Zoology 231	5	Biol. 291-292	2
Biol. 1 and 2	8	Mil. sci.	4	Zoology 207	4	Genetics 221	3
English	6	Zool. 51-151	4	Zoology 235	4	Zoology 238	4
Foreign lang.	6	Physics 1 and 2	6	Zoology 218	3	Zoology 237	3
Chem. 1 and 2	8	Physics 3 and 4	2	Biology 210	3	Electives	20
Physical educ.	2	Electives	10	Zoology 236	3		
Mil. sci.	2			Electives	10		
	32		32		32		32

COURSES OF INSTRUCTION

BIOLOGY

Lower Division

1, 2. General Biology. I and II. 4 Hrs. per semester. Mr. Margolin and Staff

Upper Division

201, 202. Teaching Materials.—I and II. 3 Hrs. per semester. Survey of devices and materials available for teaching the biological sciences. Mr. Core

215. Principles of Evolution. II. 3 Hrs. Offered in 1948-49 and alternate years. Mr. Strausbaugh

218. Biological Technique. I. 3 Hrs. Theory and practice of making microscopic preparations, etc. PR: General course in biology, Zool. 2, or equivalent. Primarily for botany and zoology majors. Mr. Margolin

219. Cytology. II. 4 Hrs. Cells, their structure and functions. Mr. Ritchie

221. Problems in Microtechnique. II. 1 to 4 Hrs. Hours to be arranged. Mr. Margolin

250. History of Biology. II. 3 Hrs. Offered in 1949-50 and alternate years. Mr. Strausbaugh

251. The Literature of Biology. I. 1 Hr. Limited to senior and graduate students. Mr. Anderson

291, 292, 293, 294. **Seminar.** I and II. 1 Hr. per semester. Staff

BOTANY

Lower Division

1, 2. **General Botany.** I and II. 4 Hrs. per semester. Miss Ammons

3. **Dendrology.** I. 3 Hrs. Classification, identification and distribution of the timber trees of the United States. PR: Biol. 2. Primarily for students in Forestry. Mr. Core

4. **Dendrology.** II. 3 Hrs. Continuation of Botany 3. Mr. Core

5. **Elementary Botany.** II. 4 Hrs. PR: Biol. 1. For students in Agriculture. Mr. Strausbaugh and Mr. Core

21. **Plant Physiology.** II. 2 Hrs. Primarily for students in Forestry. Mr. Ritchie

30 or 130. **Systematic Botany.** II. 4 Hrs. Identification of seed plants and study of their classification. Mr. Core

32. **Systematic Botany.** I. 2 Hrs. Primarily for students in Forestry. Mr. Core

Upper Division

211, 212. **Plant Morphology.** I and II. 4 Hrs. per semester. Development and structure of plants. Mr. Spangler

213. **Plant Anatomy.** I. 3 Hrs. PR: Botany 2 or equivalent. Miss Ammons

221. **Plant Physiology.** I. 4 Hrs. Functions of plants. PR: General courses in biology or botany, and Chemistry 1 and 2 or equivalent. Mr. Strausbaugh

222. **Advanced Plant Physiology.** II. 4 Hrs. PR: Botany 221 or equivalent; also courses in general physics and organic chemistry. Mr. Strasbaugh

230, 231. **Advanced Systematic Botany.** I and II 1 to 6 Hrs. (maximum). Choice of work in any group of the plant kingdom. Staff

232. **Plant Ecology.** I. 3 Hrs. Environmental relationships of plants. Offered in 1948-49 and alternate years thereafter. Mr. Core

234. **Experimental Ecology.** II. 4 Hrs. PR: Biology 1 and Botany 131 or their equivalents. Staff

235s. **Field Studies in Botany.** SI. 6 Hrs. Essentially physiographic ecology, planned for botany majors and to meet the needs of those who intend to teach or are teaching botany. The studies will be conducted in various interesting regions of the state and the entire time will be spent in the field. Mr. ————

236. **Geographic Botany.** I. 3 Hrs. Study of plant groupings and world-wide distribution of plants. Offered in 1947-48 and alternate years. Mr. Core

238. **Bryophytes.** II. 2 Hrs. Identification of liverworts and mosses. Miss Ammons

Graduate Division

380, 381, 382, 383, 384. **Research.** I and II. 1 to 6 Hrs. Staff

ZOOLOGY

Lower Division

1, 2. **General Zoology.** I and II. 4 Hrs. per semester. Mr. Taylor and Staff

3. **Elementary Zoology.** II. 4 Hrs. For students in Agriculture. Mr. Taylor and Staff

6. **Human Anatomy.** I. 4 Hrs. General anatomy for nurses. Mr. Gribble

16 or 116. **Economic Zoology.** II. 2 Hrs. Ways in which animals are harmful or useful to man. Mr. Davisson

51 or 151. **Human Physiology.** II. 4 Hrs. Mr. Anderson

205. **Ornithology.** II. 3 Hrs. Field and laboratory studies on identification, migration, protection, nesting, and food habits of birds. Mr. Margolin

Upper Division

207. **Vertebrate Embryology.** II. 4 Hrs. An introductory study of the development of vertebrates, based chiefly on the frog, fowl, and mammal. PR: General Biology or Zoology 2, or equivalent. Mr. Gribble

232. **Comparative Neuro-anatomy.** II. 2 Hrs. PR: Zool. 2 or equivalent. Mr. Gribble

233. **Advanced Comparative Anatomy.** II. 3 Hrs. PR: Zool. 2 or equivalent. Mr. Gribble

235. **Invertebrate Zoology.** II. 4 Hrs. PR: Zoology 2 or equivalent. Mr. Jones

236. **Animal Behavior.** I. 3 Hrs. PR: Zoology 2 or equivalent. Offered in 1948-49 and alternate years. Mr. Taylor

237. **Animal Ecology.** I. 3 Hrs. PR: Zoology 2 or equivalent. Offered in 1947-48 and alternate years. Mr. Taylor

238. **General Physiology.** I. 4 Hrs. PR: Zoology 2 or equivalent. Mr. Anderson

241, 242, 243, 244. **Problems in Vertebrate Anatomy.** I and II. 1 to 4 Hrs. Mr. Gribble

245, 246. **Problems in Invertebrate Zoology.** I and II. 1 to 4 Hrs. Mr. Jones

247, 248. **Problems in Physiology.** I and II. 1 to 4 Hrs. Mr. Anderson

261. **Field Zoology.** S1. 6 Hrs. Primarily for zoology majors and for those who teach or intend to teach zoology. This course aims to familiarize the students with the animal life of the state in its natural surroundings and includes the collection, identification, and study of habits of the various forms found in this region. PR: Zoology 2 or equivalent. Mr. Taylor

Graduate Division

380, 381, 382, 383, 384. **Research.** I and II. 1 to 6 Hrs. Staff

Chemistry

Professors COLLETT, DAVIES, DUSTMAN, HUBERT HILL, and LAZZELL; Associate Professor GIBSON; Assistant Professors BARDOLPH, HALL, IFFLAND, and TIMNICK; Instructors HICKMAN, MILLER, POPOVICH and WATSON

Chemistry 1 and 2 are prerequisite to all courses in chemistry. Chemistry 5, 6, 233, 238, 260, and 261; Mathematics[4] 107 and 108; minimum one year of physics[5] is required of candidates for the A. B. degree who major in chemistry. Mathematics through the calculus is required of majors.

Students entering the University with the intention of studying chemistry as a profession leading to a degree in the College of Arts and Sciences, with major in chemistry, should take Mathematics 3 and 4 and Chemistry 1 during the first semester of their first year.

A deposit is required of all students who take laboratory courses.

BACHELOR OF SCIENCE IN CHEMISTRY

The requirements for the Bachelor of Science in Chemistry degree are essentially the same as the requirements for the Bachelor of Arts degree with the major in chemistry for all non-chemical courses. The distinction lies mainly in the extra chemistry (elective) requirements, and an additional 6 hours of a second language above that required for the A.B. degree.

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Chem. 1 & 2	8	Chem. 5	4	Chem. 233	5	Chem. 260	5
English	6	Chem. 6	5	Chem. 238	5	Chem. 261	5
Foreign lang.	6	Math. 5	4	Math. 108	4	Chem. Eng. 214, 215	4
Mathematics 3	4	Foreign lang.	6	Physics 105, 106	5	Chem. electives	8
Mathematics 4	2	Math. 107	4	Physics 107, 108	5	Other electives	11
Electives	4	Electives (not chemistry)	8	Chem. Eng. 200	2		
Physical ed.	2	Military	4	Chem. electives	4		
Military	2			Other electives	4		
	34		35		34		33

COURSES OF INSTRUCTION[1]

Lower Division

1. **Inorganic Chemistry.** I, II. 4 Hrs. Required of all students whose work calls for the first year of chemistry. Elective for others. Primarily for freshmen. Staff

2. **Inorganic Chemistry.** I, II. 4 Hrs. Required of all students whose work calls for first year of chemistry. Elective for others. Primarily for freshmen. Staff

5 or 105. **Qualitative Analysis.** I. 4 Hrs. Required of students whose major is chemistry, and pharmacy students. 2 lect. and 2 3-hour lab. periods. PR: Chem. 1 and 2. Mr. Hill and Mr. Timnick

6 or 106. **Quantitative Analysis.** II. 4 and 5 Hrs. Chemistry 5 should precede this course wherever possible. Required of students whose major is chemistry, mining engineering, and pharmacy. PR: Chemistry 1 and 2. Mr. Hill and Mr. Gibson

[1]Chemistry 1 and 2 are prerequisite to all other courses in chemistry. Three-year and four-year pre-medical students are referred to page 132 for outline of required courses. For courses in biochemistry see page 273 and for courses in pharmaceutical chemisty see page 291. A deposit is required of all students who take laboratory courses.

[4]If mathematics is elected as a minor, an additional 3-hour course beyond calculus (usually Differential Equations) is required.

[5]Physics 105, 106, 107, and 108 may count as a minor. If Physics 1, 2, 3 and 4 are offered, nine additional upper-division hours in physics are required to absolve the minor.

8. **Qualitative Analysis.** S. 2 Hrs. Given in Summer Session only for engineering students. PR: Chem. 1 and 2. Staff

10. **Quantitative Analysis.** I. 2 Hrs. Primarily for engineering students. PR: Chem. 1 and 2. Mr. Hill and Mr. Gibson

15 or 115. **Quantitative Analysis.** I, II. 3 Hrs. For pre-medical and chemical engineering students. PR: Chemistry 2. Mr. Hill and Mr. Gibson

31 or 131. **Organic Chemistry.** I. 4 Hrs. For students in agriculture and home economics. PR: Chemistry 2. Mr. Dustman

36 or 136. **Organic Chemistry** II 6 Hrs. Required of pre-medical and pharmacy students. PR: for premedical students, Chem. 15. PR: for pharmacy students, Chem. 6. Mr. Lazzell

63 or 163. **Physical Chemistry.** I. 3 Hrs. Required of premedical students. PR: Chem. 2. Mr. Davies

Upper Division

107. **Quantitative Analysis.** II. 2 Hrs. Continuation of Chemistry 15 and 115. Mr. Hill and Mr. Gibson

111. **Synthetic Inorganic Chemistry.** I. 4 Hrs. PR: Chemistry 6 or 106. Mr. Timnick

141, 143. **Asssigned Topics.** I. 1 to 5 Hrs. Staff

142, 144. **Assigned Topics.** II. 1 to 5 Hrs. Staff

162. **The Chemistry of Colloids.** II. 4 Hrs. Required of four-year premedical students. Mr. Davies

208. **Quantitative Analysis.** I. 3 Hrs. PR: Chemistry 6, Physics 4 or 107 and 108, and Mathematics 5. Mr. Gibson

212. **Semi-micro-qualitative Analysis.** I or II. 2 or 3 Hrs. PR: Organic chemistry. Mr. Hill

214. **Qualitative Organic Analysis.** I or II. 3 Hrs. PR: Chem. 238. Mr. Bardolph

215. **Quantitative Organic Analysis.** I or II. 3 Hrs. PR: Chem. 238. Mr. Bardolph

218. **Dairy Chemistry.** I. 3 Hrs. For students in the College of Agriculture. PR: for undergraduates, Chemistry 31; for graduates, Chemistry 6 or 15, and Chem. 31 or 233. Offered 1948-49 and alternate years. Mr. Dustman

233. **Organic Chemistry.** I. 5 Hrs. Required of students who major in chemistry, of students in chemical and mining engineering. PR: Chemistry 6. Mr. Lazzell and Mr. Iffland

238. **Organic Chemistry.** II. 4 or 5 Hrs. PR: Chem. 233. Mr. Lazzell and Mr. Iffland

247. **Stereochemistry.** I. 2 Hrs. Open to seniors. PR: Chem. 238. Mr. Iffland

251. **Industrial Inorganic Chemistry.** I. 3 Hrs. PR: Chemistry 5 and 6.

252. **Industrial Inorganic Chemistry.** II. 3 Hrs. PR: Chemistry 233.

260. **Physical Chemistry.** I. 3 to 5 Hrs. Required of chemistry majors and chemical engineering students, the latter for 3 hours' credit. PR: Chemistry 233, Physics 4 or 107 and 108, and Mathematics 108. Mr. Collett

261. **Physical Chemistry.** II. 3 to 5 Hrs. Required of chemical engineering students and chemistry majors. PR: Chemistry 260. Mr. Collett

273. **Chemical Literature.** I or II. 2 Hrs. Open to seniors. PR: Chem. 6 and 238. Staff

274. **History of Chemistry.** II. 2 Hrs. Open to seniors. PR: Chemistry 6, or equivalent, and organic chemistry. Mr. Hill

275. **Modern Chemical Theories and Practices.** I, II. 2 Hrs. per semester. PR: 16 hours of chemistry. Not for graduate chemistry majors. Mr. Collett

Graduate Division

277. **Synthetic Drugs.** I or II. 2 Hrs. PR: Chemistry 238 or equivalent. Mr. Lazzell

316. **Advanced Inorganic Chemistry.** II. 2 Hrs. PR: Chemistry 261. Mr. Timnick

317. **Modern Plastics.** I or II. 2 or 3 Hrs. Staff

343. **Advanced Organic Chemistry.** I. 4 Hrs. PR: Chemistry 238 or equivalent. Mr. Lazzell

345. **Theories of Organic Chemistry.** II. 2 Hrs. PR: Chemistry 343. Mr. Lazzell

367. **Advanced Physical Chemistry.** I. 3 Hrs. PR: Chemistry 261. Mr. Davies

368. **Advanced Physical Chemistry.** II. 3 Hrs. PR: Chemistry 367 Mr. Davies

369. **Chemical Kinetics.** I or II. 2 Hrs. PR: Chem. 261. Mr. Hall

380. **Electrochemistry.** I or II. 3 Hrs. PR: Chemistry 238 and 261. Mr. Collett

383. **Advanced Quantitative Analysis.** I or II. 3 Hrs. PR: Chem. 208, 238, 261. Mr. Hill

388. **Valence and Molecular Structure.**[1] I or II. 2 Hrs. PR: Mathematics 108, Physics 108, Chemistry 261. Mr. Gibson and Mr. Hall

389, 390. **Chemical Thermodynamics.**[2] I or II. 2 Hrs. per semester. PR: Chemistry 261 and Mathematics 208. Mr. Gibson

391, 392. **Journal Meeting and Seminar.** I or II. 1 Hr. per semester. Required of students working for graduate degrees with major in chemistry Recommended as a minor for students from other departments. Staff

395, 396. **Special Topics.** I and II. 1 to 3 Hrs. per semester. Chemistry of the carbohydrates, organic nitrogen compounds, the phase rule, dyes and dye intermediates, food analysis, study of chemical literature as preparation for research, chemical microscopy, and crystallography are suggested topics. Staff

397, 398, 399A, 399B. **Research.** I and II. 1 to 6 Hrs. per semester. 6 Hrs. Required for the Master's degree. More than 6 Hrs. each semester may be carried by candidates for a higher degree. Staff

Graduate Division

369. **Chemical Kinetics.** I or II. 2 Hrs. PR: Chem. 261. Mr. Hall

380. **Electrochemistry.** I or II. 3 Hrs. PR: Chem. 238 and 261. Mr. Collett

383. **Advanced Quantitative Analysis.** I or II. 3 Hrs. PR: Chem. 208, 238, and 261. Mr. Hill

[1]To alternate with Chemistry 389, 390.
[2]Offered in alternate years; not available in 1948-49.

Classics

Professor BROUZAS

The department of classics offers courses in the Greek and Latin languages and in classical civilization. Courses in the department are intended not only to give students a thorough knowledge of the Greek and Latin languages and literatures but also to acquaint them with the classical culture in general. A student with major in Latin should plan to include at least 6 hours of Greek in his course, preferably in the sophomore year.

Courses suggested for classics majors with English as a second teaching field for certification in West Virginia:

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3	English 65[1]	3	Journalism 15[1]	3
English 3[1]	3	English 4[1]	3	Latin	3	Latin	3
Latin (according to preparation)	3	Latin	3	Greek 1	3	Greek 2	3
Laboratory sci.[2]	4	Laboratory sci.[2]	4	Sociology or economics	3	Sociology or economics	3
Physical educ.	1	Physical educ.	1	Physical educ.	1	Speech[1]	3
Elective	2	Elective	2	Elective	3	Elective	2
	16		16		16		17

COURSES OF INSTRUCTION

LATIN

Lower Division

1. **Elementary Latin.** I. 3 Hrs. Elements of the Latin language. Completion of a standard beginner's book.

2. **Elementary Latin.** II. 3 Hrs. Continuation of Latin 1, consisting of study of a standard second-year book.

3. **Intermediate Latin.** I. 3 Hrs. Selections from Caesar, Aulus Gellius, Nepos, and from other authors of comparable ease, designed to prepare students to read orations of Cicero and other Latin of similar difficulty. PR: Latin 2 or two units of high-school Latin.

4. **Cicero's Orations.** II. 3 Hrs. PR: Latin 3, or 2 units of high-school Latin.

5. **Latin for Law Students: Selections from Legal Latin and the Institutes of Justinian.** II. 3 Hrs. PR: Latin 3 or 2 units of high-school Latin.

6. **Vergil's Aeneid.** II. 3 Hrs. PR: Latin 4 or 3 units of high-school Latin.

12. **Selections from Roman Prose.** I. 3 Hrs. Cato to the end of the Silver Latin period. PR: Latin 4 and 6.

14. **Roman Comedy.** I. 3 Hrs. Plautus, Captivi, or Menaechmi; Terence, Adelphoe, or Andria. PR: Latin 4 and 6, or 4 units of high-school Latin.

21. **Roman Letter-writing.** II. 3 Hrs. Selections from the letters of Cicero, Pliny, Marcus Aurelius, and Fronto. PR: Latin 4 and 6 or 4 units of high-school Latin.

[1]Students wishing to offer social science for certification may substitute history for this course.

[2]Students who wish to have social studies as their second teaching field may elect geology for the laboratory science.

22. **Selections from Roman Poetry.** I. 3 Hrs. Selections from the elegiac, lyric, and iambic poets and from Martial's epigrams. PR: Latin 4 and 6 or equivalent.

23. **Livy and Cicero.** II. 3 Hrs. Selections from Livy books 21 and 22; Cicero's De Senectute or De Amicitia. PR: Latin 14 and 21, or equivlent.

24. **The Lyric and Bucolic Poets.** II. 3 Hrs. Selections from Horace's Odes and Epodes; from Catullus and other poets; selections from the Bucolics of Vergil and Calpurnius.

25. **Latin Composition.** II. 3 Hrs. A review of the principles and syntax of the Latin language, and practice in writing simple Latin. PR: Latin 14 and 21, or equivalent.

Upper Division

130. **Leadership in Classical Club.** II. 2 Hrs. Materials for enriching, vivifying and making Latin concrete; Latin posters, scrap books, Latin derivatives in English and modern languages, Latin playlets, Latin mottoes, proverbs, mythological allusions, etc. PR: Four years of high school Latin or twelve hours of Latin taken in college. Offered every other year. Approved for high-school certification in co-curricular activity.

201. **The Story and Novel.** I. 3 Hrs. The origin of the story and novel is traced from Homer to the medieval Greek and Latin romance writers. Selections from Petronius, the Cena Trimalchionis, and from Apuleius, Cupid and Psyche. PR: Latin 12 and 22, or equivalent.

202. **Drama.** II. 3 Hrs. A brief history of the origin and development of Greek and Roman drama. The Menaechmi of Plautus, the Andria of Terence, and Medea of Seneca. PR: Latin 12 and 22, or equivalent.

203. **Oratory.** II. 3 Hrs. A bird's eye view of Greek and Roman oratory is given and part of the first book of Cicero's De Oratore; selections from Quintilian's Institutes and from Tacitus' Dialogus de Oratoribus. PR: Latin 12 and 22, or equivalent.

227. **Vulgar Latin—Prose and Verse.** I. 3 Hrs. Selections from Latin inscriptions with a view to studying the development of the Latin language from its earliest times; also selections from medieval and later Latin writers are read which show the passing of the Latin language into the Romance languages. PR: Latin 12 and 22, or equivalent.

231. **Satire.** II. 3 Hrs. Greek satirical writings and the origin of the Roman satire. Selections from the Satires and Epistles of Horace, and from the Satires of Persius and Juvenal. PR: Latin 12 and 22, or equivalent.

234. **History.** I. 3 Hrs. The origin and development of Roman historiography and its Greek antecedents. Selections from Livy's History, from Tacitus' Agricola, and from Suetonius' Julius Caesar. PR: Latin 12 and 22, or equivalent.

235. **Epic.** I. 3 Hrs. The origin and development of the Greek and Roman epic. Selections from Vergil's Aeneid, from Lucretius' De Rerum Natura, and from the earlier and later epic poets. PR: Latin 12 and 22, or equivalent.

236. **Philosophy.** II. 3 Hrs. The origin and development of Greek Philosophy and its influence upon Roman philosophy. Selections from Cicero's Tusculan Disputations on the immortality of the soul and from Seneca's Dialogues and Epistles. PR: Latin 12 and 22, or equivalent.

Graduate Division

381, 382. Seminar. Introduction to Research. I and II. 3 Hrs. each semester. Methods of textual, literary, and historical criticism. Evaluation of text, sources, and background of an author, whose principal work is studied and analyzed. PR: At least three courses of upper division Latin, or equivalent.

383, 384. Thesis. I and II. 3 Hrs. each semester. Six hours of credit are allowed for a thesis, required for degree of Master of Arts in the department. A controversial subject, or a little explored subject is usually assigned, intended not only to acquaint student with subject-matter and to develop the various sides of research method but also to produce a creditable piece of research.

CLASSICAL CIVILIZATION[1]

Upper Division

237. Greek and Roman Religion and Art. I. 3 Hrs. A study of the Greek and Roman religious ideas and myths, with particular emphasis on their influence upon the art and literature of the ancient and the modern world

239. **Greek and Roman Life and Thought.** I. 3 Hrs. A survey of Greek and Roman culture and thought as reflected in classical literature. Selections from Greek and Latin literature in translation.

GREEK

Lower Division

1. Elementary Greek. I. 3 Hrs. A course in the elements of the Greek language. Offered in 1947-48 and alternate years.
2. **Selections from Greek Literature (Prose).** II. 3 Hrs.
3. **Selections from Greek Literature (Poetry).** II. 3 Hrs.
4. Selections from Hellenistic and Biblical Greek Literature. I. 3 Hrs.
5. **Selections from Medieval and Modern Greek Literature.** II. 3 Hrs.

Economics and Business Administration

Professors Tower and Dadisman; Associate Professors Backer, Fishman, Roberts, and Shilland; Instructors Coutts and Sollars; Lecturers Farmer and Kirsch

GENERAL OBJECTIVES

The program of the Department of Economics and Business Administration has been designed to meet the specialized needs of students who are preparing for careers in commerce and industry and to provide a general education for them as well as for that group who, after a period of graduate training, plan to engage in the professional practice of economics. It has been so arranged as to require only those courses which are fundamental to a sound business training while allowing the student considerable latitude in selection of electives in his major and minor fields as well as in other areas of study.

[1]These courses are offered as being of cultural value to all students. They present a picture of a cross-section of the Greek and Roman society, life, manners, thought, literature, art, science, and law. The study of the influence of classical antiquity upon the subsequent periods prepares one for a better appreciation of modern civilization. Each course may be taken separately, if so desired.

While every businessman should become proficient in the technique and practices of his profession, it is equally important that he be fitted to assume the responsbilities of intelligent citizenship and the social obligations which his position will entail. He should become thoroughly competent in his own field, but at the same time he should acquire a broad general culture in order better to understand and appreciate those enduring values upon which modern civilization rests. To accomplsh this latter objective, the student whose major field is economics or business is strongly urged to orient his program of study in such a manner that the end result will be an educated man and not merely a technician.

DEGREE REQUIREMENTS FOR GRADUATION

The department offers programs of training leading to either the A. B. degree with a major in economics or the B. S. degree with a major in business administration. Within the broad field of business administration the student may concentrate his preparation in the special areas of accounting, banking and finance, management, marketing and merchandising, secretarial studies, or in general business.

A candidate for the A. B. degree with a major in economics must complete a minimum of 128 college hours for graduation. He must also complete a minimum of 24 upper-division hours in the Department of Economics and Business Administration before receiving his degree. Of this group a minimum of 18 hours must be taken in the field of economics as distinct from business administration. However, in no instance will he be given undergraduate credit for more than 40 college hours of work in economics and business administration combined. Finally, he must complete a minimum of 9 upper-division college hours in another field approved by his adviser for a minor subject.

A candidate for the B. S. degree with a major in business administration must complete a minimum of 132 college hours for graduation. He must also complete a minimum of 30 upper-division hours in the Department of Economics and Business Administration before receiving his degree. He may receive undergraduate credit for a maximum of 54 college hours taken in the department, and he, too, must complete a minimum of 9 upper-division college hours in another field approved by his adviser for a minor subject.

Candidates for either degree must present satisfactory evidence of the fact that they have completed Econ. 1 and 2, Principles of Economics, and Econ. 131, Business Statistics. Candidates for the A.B. degree must complete Econ. 132 in addition to the group of subjects indicated above, while candidates for the B.S. degree must complete additionally Business 5 and 6, Principles of Accounting, before graduation.

Candidates for either degree must complete a minimum of 54 college hours at the upper-division level out of the total number of hours required for graduation.

CURRICULUM IN ECONOMICS AND BUSINESS ADMINISTRATION

The Lower-division Program

The lower-division program is designed to meet certain basic requirements for all students who matriculate in the College of Arts and Sciences and to provide a knowledge of fundamental subjects essential to the effective study of

economics and business administration. Candidates for either the A. B. degree with a major in economics or the B. S. degree with a major in business administration are expected to complete the following courses or course groups during their first two years at the University:

FIRST YEAR	SECOND YEAR
English 1, 2	English 13, 14, or 16
Foreign language	Economics 1, 2
History 1, 2, or Humanities 1, 2	Foreign language (if not already completed)
Psychology 3, 4 or another Laboratory science	Political Science 5, 6, or History 52, 53
Mathematics 2 or 3	Speech 11
Physical education (men and women)	Philosophy 4
Military science (men)	Business 5, 6 (candidates for the B. S. degree only)
	Physical education (women)
	Military science (men)

THE UPPER-DIVISION PROGRAM

CURRICULUM FOR THE A. B. DEGREE WITH A MAJOR IN ECONOMICS

Professor Dadisman, Adviser

Courses in the Department Required of Economics Majors:

Economics 111, Money and Banking
Economics 131, 132, Statistics
Economics 200, Land Economics
Economics 238, Economic Theory
Economics 240, Labor Relations

Additional Courses Recommended in the Department:

A minimum of 6 college hours to be selected from the following groups:
Economics 114, 151, 233, 241, 244, 261, 262
Business 133, 242, 251, 252

Courses Recommended Outside the Department:

Courses outside the Department are to be selected only after consultation with the student's faculty adviser. Representative courses in the following departments are recommended for economics majors: English, speech, psychology and philosophy, sociology, mathematics, history, political science, fine arts, and geology.

CURRICULUM FOR THE B. S. DEGREE WITH A MAJOR IN BUSINESS ADMINISTRATION

GENERAL BUSINESS

Professor Tower, Adviser

Courses in the Department Required of General Business Majors:

Economics 111, Money and Banking
Economics 131, Statistics
Economics 240, Labor Relations
Business 121, Elements of Marketing
Business 141, 142, Business Law

Additional Courses Recommended in the Department:

A minimum of 12 college hours to be selected with the approval of the adviser.

Courses Recommended Outside the Department:

See recommendations under Economics Major

BANKING AND FINANCE

Associate Professor FISHMAN, Adviser

Courses in the Department Required of Banking and Finance Majors:
- Economics 111, Money and Banking
- Economics 114, Corporation Finance
- Economics 131, Statistics
- Economics 151, Business Cycles
- Economics 261, Public Finance
- Business 141, 142. Business Law

Additional Courses Recommended in the Department:

A minimum of 9 college hours to be selected from the following groups:
- Economics 132, 200, 201, 238, 244, 262
- Business 130, 133, 181, 224, 251, 257, 260, 270

Courses Recommended Outside the Department:

See recommendations under Economics Major. Courses in English, speech, and psychology will be particularly helpful to students who are planning careers in banking or finance.

MANAGEMENT

Associate Professor SHILLAND, Adviser

Courses in the Department Required of Management Majors:
- Economics 131, Statistics
- Economics 237, Trade Unionism, or Economics 239, Collective Bargaining and Labor Legislation
- Economics 240, Labor Relations
- Business 141, 142, Business Law
- Business 181, Business Management
- Business 245, Personnel Management

Additional Courses Recommended in the Department:

A minimum of 9 college hours to be selected from the following groups:
- Economics 114, 132, 151, 201, 241, 244, 261
- Business 121, 122, 130, 133, 203, 204, 224, 226, 251, 257, 260, 270

Courses Recommended Outside the Department:

Students majoring in management should plan to do their minor work in psychology. For a list of other appropriate elective fields see recommendations under Economics Major.

SECRETARIAL STUDIES

Instructor COUTTS, Adviser

Courses in the Department Required of Secretarial-studies Majors:
- Economics 131, Statistics
- Business 121, Elements of Marketing
- Business 141, Business Law
- Business 143, 144,* Typewriting
- Business 145, 146, Shorthand
- Business 147, Secretarial Training and Office Practices

Additional Courses Recommended in the Department:

A minimum of 6 college hours to be selected from the following groups:

Economics 111, 114, 132, 201, 240, 261

Business 121, 128, 130, 133, 181, 224, 245, 257, 270

Courses Recommended Outside the Department:

English, psychology, or speech are good minor subjects for students planning to enter the secretarial field upon graduation. For a list of other appropriate elective fields see recommendations under Economics Major.

MARKETING AND MERCHANDISING

Associate Professor ROBERTS, Adviser

Courses in the Department Required of Marketing and Merchandising Majors:

*Buisness 148, Transcription, may be offered in place of Business 144, Typewriting, by qualified majors.

Economics 131, Statistics
Business 121, Elements of Marketing
Business 122, Marketing of Manufactured Goods
Business 125, Retailing
Business 128, Advertising
Business 141, 142, Business Law

Additional Courses Recommended in the Department:

A minimum of 7 college hours to be selected from the following groups:

Economics 111, 114, 151, 241, 244

Business 133, 141, 142, 181, 224, 226, 231, 232, 242, 251, 257, 260, 270

Additional Courses Recommended Outside the Department:

It is suggested that students planning to major in marketing and merchandising do their minor work in either English, psychology, or speech. Other minor fields may be selected with the adviser's approval.

ACCOUNTING

Associate Professor BACKER, Adviser

Courses in the Department Required of Accounting Majors:

Economics 131, Statistics
Business 101, Intermediate Accounting
Business 102, Advanced Accounting
Business 141, 142, Business Law
Business 203, 204, Cost Accounting
Business 205, 206, Income-tax Accounting
Business 207, 208, Auditing
Business 209, Municipal Accounting
Business 212, Accounting Systems

Additional Courses Recommended in the Department:

Courses in excess of the minimum departmental requirements may be elected from the following groups:

Economics 111, 114, 132, 151, 240, 261, 262

Business 121, 133, 181, 213, 214, 224, 251, 257, 260

Additional Courses Recommended Outside the Department:

See elective subjects listed under Economics Major.

COURSES OF INSTRUCTION

ECONOMICS

Lower Division

1. **Principles of Economics.** I, II. 3 Hrs. Organization and principles of economic activity. Staff

2. **Principles of Economics.** I., II. 3 Hrs. Economics 1 and 2 are prerequisite to upper-division courses. Staff

Upper Division

111. **Money and Banking.** I. 3 Hrs. Our system of monetary and banking arrangements, viewed in relation to functioning of the economic system as a whole. PR: Econ. 1 and 2. Mr. Fishman

114. **Corporation Finance.** II. 3 Hrs. The corporate factor in present-day economic life with particular reference to its financial aspects. PR: Econ. 1 and 2 or permission of instructor. Staff

131. **Statistics.** I. 3 Hrs. Methods of collecting, presenting, analyzing, and interpreting business data, with special emphasis on index numbers, trend fitting, seasonal corrections, and correlation. PR: Econ. 1 and 2 and a knowledge of elementary algebra. Mr. Tower

132. **Problems in Statistics.** II. 3 Hrs. Sampling theory, complex trends, multiple and partial correlations; statistical research. PR: Econ. 131 and consent of instructor. Mr. Tower

151. **Business Cycles.** I. 3 Hrs. Industrial fluctuations; emphasis on possible causes and remedies. PR: Econ. 1 and 2 and 131, or consent of instructor. Mr. Fishman

173. **Economics of Consumption.** I. 3 Hrs. Place of consumer in modern society; business practices and policies affecting everyday interests of consumer; consumer problems and their solution. PR: Econ. 1 and 2 or consent of instructor. Staff

200. **Land Economics.** I. 3 Hrs. A land-policies course; characteristics, utilization, and conservvation of urban, rural, mineral, forest, and recreational land. PR: Econ. 1 and 2. Mr. Dadisman

201. **Real Estate.** II. 3 Hrs. Principles and practices of the business of real estate. PR: Econ. 200 or consent of instructor. Mr. Dadisman

225. **Seminar in Banking and Finance.** I. 3 Hrs. PR: Econ. 111 and 114 or consent of instructor. Mr. Fishman

233. **Comparative Economic Systems.** I. 3 Hrs. Structure and processes of existing economic systems throughout the world including a review of the basic principles of free enterprise, socialistic, communistic, and fascistic societies. Comprehensive analysis based on current and recent experiments in these economies. PR: Econ. 1 and 2 Mr. Fishman

236. **Labor Movements.** II. 3 Hrs. Origins and development of labor organizations with particular reference to the United States. PR: Econ. 1 2, and 240, or consent of instructor. Mr. Shilland

237. **Trade Unionism.** I. 3 Hrs. Policies and attitudes of trade unions with reference to production involving study of a variety of practices and shop rules together with analysis of relationships between trades unions and employers. PR: Econ. 240, 1, and 2, or consent of instructor. Mr. Shilland

238. **Economic Theory.** II. 3 Hrs. Intended primarily to afford training and experience in use of those analytical methods and techniques which are specially helpful in dealing with fundamental economic problems. PR: Econ. 1 and 2. Mr. Fishman

239. **Collective Bargaining and Labor Relations.** I. 3 Hrs. Labor-management relations in terms of recently developed movements in this field as covered by comprehensive surveys that present the leading issues and problems. Influence of government is also considered insofar as it seeks to regulate such labor-management relations. PR: Econ. 1, 2, and 240, or consent of instructor. Mr Shilland

240. **Labor Problems.** II. 3 Hrs. History of modern labor movements; analysis of economic and social problems arising from relations between capital, labor, and the state. PR: Econ. 1 and 2. Mr Shilland

241. **Transportation.** I. 3 Hrs. Nature, history, and problems of inland transportation, with special reference to the United States. PR: Econ. 1 and 2 Mr. Dadisman

244. **Public Utilities.** II. 3 Hrs. Development of regulation; economics of valuation, rate-making, and "Federal Power Policy." PR: Econ. 1 and 2. Staff

252. **History of Economic Thought.** II. 3 Hrs. Economic ideas in perspective of historic development. PR: Econ. 238. Mr. Fishman

261. **Public Finance.** I. 3 Hrs. Fiscal organization and administration of modern governments; public expenditures; governmental revenues; problems of public debt. PR: Econ. 1 and 2. Mr. Tower

262. **Taxation.** II. 3 Hrs. Comparative study of taxes and tax systems. Particular emphasis upon tax structures of the Federal government and the State of West Virginia. PR: Econ. 261 or consent of instructor. Mr. Tower

Graduate Division

352. **Advanced Economic Theory.** II. 3 Hrs. Recent deveelopments in economic theory such as those relating to imperfect competition, monetary problems, and collectivist economy. PR: Econ. 238. Staff

358. **Bibliography and Research.** II. 2 Hrs. Research methods, sources of information, techniques, devices, approaches, procedures, research analysis, and presentation of results. PR: Consent of instructor Staff

373 374. **Thesis.** I, II. 2 or 3 Hrs. per semester. Staff

390, 391. **Seminar in Economics.** I, II. 2 Hrs. per semester. Staff

BUSINESS ADMINISTRATION

Lower Division

5. **Principles of Accounting.** I. 3 Hrs. Fundamental bookkeeping procedures and preparation of financial statements. Staff

6. **Principles of Accounting.** II. 3 Hrs. Interpretation of commercial and industrial records. Uses which may be made of accounting data in operating business enterprises. PR: Business 5. Staff

7. **Business Communications.** II. 3 Hrs. A study of the vocabulary and technique of business writing as applied to various forms of research and reporting. Correct English usage in modern business forms and letters. PR: 8 hrs. of English composition. Miss Coutts

Upper Division

101. **Intermediate Accounting.** I. 3 Hrs. Valuation of accounts, working capital, and profit-and-loss analysis, comparative statements, and source and application of funds. PR: Business 6. Staff

102. **Advanced Accounting.** II. 3 Hrs. As applied to partnerships, corporations, branch offices, subsidiaries, and foreign trade. PR: Business 101. Staff

113. **Business Organization.** I. 3 Hrs. Organization of American business viewed in light of modern tendencies toward large-scale development. PR: Econ. 1 and 2. Staff

121. **Elements of Marketing.** I. 3 Hrs. The economic functions of marketing, principles of marketing industrial and consumer goods, contemporary marketing problems. PR: Econ. 1 and 2. Mr. Roberts

122. **Marketing of Manufactured Goods.** II. 3 Hrs. Case method applied to modern problems of sales management. Particular attention to manufactured goods. PR: Econ. 1 and 2 and Business 121. Mr. Roberts

125. **Retailing.** I. 3 Hrs. Retail-store organization, control, and other operating problems and policies in present-day retail outlets. PR: Business 121 and 122. Mr. Roberts

128. **Advertising.** II. 3 Hrs. Techniques and procedure of local and national advertising using the problem approach. Mr. Roberts

130. **Sales Management.** II. 2 Hrs. Selection, training, compensating, and supervising of salesmen; sales control by quotas, sales budgets, properly balanced sales territories, and routes; sales promotion. PR: Business 121 and 122. Staff

133. **General Insurance.** I. 3 Hrs. Theory of risk and its application to insurance. Principles underlying all forms of insurance—life, property, casualty, fire surety. PR: Econ. 1 and 2. Staff

135. **Life Insurance.** I. 2 Hrs. Principles as they influence economic and social life of the community, and legal regulation of insurance companies. PR: Business 133. Staff

136. **Casualty Insurance.** II. 2 Hrs. Nature of and reasons for existing practice in casualty insurance. Fire, marine, liability, automobile, title, and credit insurance and corporate bonding. PR: Business 133. Staff

139. **Sales Management.** II. 2 Hrs. Selection, training, compensating, and supervising of salesmen; sales control by means of quotas, sales budgets, properly balanced sales territories, and routes; sales promotion. PR: Business 121 or 127. Staff

141, 142. **Business Law.** I, II. 3 Hrs. per semester. Fundamentals of the law of contracts, agency, negotiable instruments, partnership, corporations, and sales as applied to business situations. Not open to students preparing for Law degree. Mr. Farmer

143, 144. **Typewriting.** I, II. 2 Hrs. per semester. Instruction in formation of accurate typing habits. Mrs. Creed

145. **Shorthand.** I. 4 Hrs. Gregg shorthand for beginners. Miss Coutts

146. **Shorthand.** II. 4 Hrs. Intensive review of fundamental principles of Gregg shorthand; development of accurate writing principles and ability to transcribe business and manuscript materials. Miss Coutts

147. **Secretarial Training and Office Practice.** I. 3 Hrs. Supervised practice in operation of calculating, duplicating, and transcribing machines; study of representative filing systems, proofreading, and business forms. Miss Coutts

148. **Transcription.** II. 2 Hrs. A course in transcription for advanced students of typewriting and shorthand. Offered only during the second semester of each year. PR: consent of the instructor. Miss Coutts

181. **Business Management.** II. 2 Hrs. Principles of organization, system control, standards, research, public relations, executive decisions, as applied to the modern business unit. PR: Econ. 1 and 2 and Business 5 and 6 or consent of instructor. Staff

203, 204. **Cost Accounting.** I, II. 3 Hrs. per semester. Application of labor, material, and burden costs to the product unit under job-order or process costing. Standard costs. PR: Business 5 and 6. Mr. Backer

205, 206. **Income-tax Accounting.** I, II. 3 Hrs. per semester. Preparation of income-tax returns from accounts of individuals, partnerships, and corporations. PR: Business 101. Mr. Kirsch

207, 208. **Auditing.** I, II. 3 Hrs. per semester. Duties and responsibilities of auditor; methods of verification of balance sheet and profit-and-loss accounts; working papers and schedules, audit reports, and certificates. PR: Business 101, 102, 204, 206, or consent of instructor. Mr. Backer

209. **Municipal Accounting.** I. 2 Hrs. Principles of governmental accounting and fiscal administration. Accounting for funds. Revenues and expenditures. Assets and liabilities. Reporting. Federal accounting. Mr. Backer

212. **Accounting Systems.** II. 2 Hrs. Building accounting systems; journals and ledgers; types of accounting systems; account charts and manual of instruction; study of selected accounting systems. PR: Business 101. Mr. Backer

213, 214. **C.P.A. Problems.** I, II. 3 Hrs. per semester. Advanced. For accounting majors preparing for certification examinations. Open only to students who have completed a minimum of 18 hrs. in accounting with average grade of "B" or higher. Mr. Backer

224. **Credits and Collections.** II. 3 Hrs. Principles and practices of credit management with particular attention to mercantile credit. PR: Business 121. Mr. Roberts

226. **Industrial Purchasing.** II. 3 Hrs. Corporate and governmental procurement problems facing the modern purchasing executive. PR: Econ. 1 and 2. Mr. Roberts

231, 232. **Marketing Research.** I, II. 2 Hrs. per semester. The purpose of this course is to train students in the utilization of present-day marketing research techniques in the solution of practical marketing problems with particular reference to West Virginia. PR: Open to senior and graduate students of marketing and merchandising. Mr. Roberts

242. **Foreign Trade.** II. 3 Hrs. Development of trade among nations, theories of trade, policies, physical factors, trends, barriers, adjustment of theory and facts. PR: Econ. 2 and consent of instructor. Staff

245. **Personnel Management.** II. 3 Hrs. Principles which underlie the development of employer and employee interests. PR: Econ. 240. Mr. Shilland

251. **Business and the State.** I. 3 Hrs. Government in its role of adviser and umpire; analysis of governmental policies and practices affecting business. PR: Econ. 1 and 2. Mr. Fishman

257. **Problems of Small Business.** I 2 Hrs. An analysis of the specific problem facing small businesses in our present-day American economy. A specialized management course designed for students who wish to prepare themselves for proprietorship of a small business. The treatment in this course is for those already in business as well as for potential owners and operators of a small business. PR: Open only to seniors and graduate students who are majors in business administration. Staff

260. **Managerical Statistics.** II. 3 Hrs. Statistical techniques applied to industrial research and quality control. PR: Econ. 131, 132, or Math. 107, 108. Staff

270. **Public Relations.** II. 2 Hrs. Molding public opinion; establishing general prestige; developing internal public relations in industry; techniques of public relations. PR: Open only to seniors and graduate students who are majors in economics or business administration. Staff

Courses for Non-departmental Students

The following courses are open only to the non-departmental students referred to in the course descriptions.

ECONOMICS

30. **Fundamentals of Economics.** For engineers. I. 3 Hrs. Staff
103. **Economics and Accounting.** I. 3 Hrs. For engineers. Staff
105. **Public-welfare Accounting.** I. 3 Hrs. Open to students of social work in pre-professional curriculum. Staff

BUSINESS ADMINISTRATION

110. **Accounting for Engineers.** II. 2 Hrs. PR: Econ. 103. Staff

English Language and Literature

Professors CROCKER, DRAPER, and SMITH; Associate Professors Bishop (Adviser), BRAWNER, CHAPPELL; Assistant Professors ANDERSON, BATTLES, DARBY, FOSTER, GAINER, PAGE, PETTIGREW, REED, and SAYRE; Instructors ALLEN, BEVINS, BLUMERT, BOARD, DAWSON, DOWELL, RUTH HOLDEN, SUSAN HOLDEN, LEONIAN, MOCKLER, and MORGAN

To be received as a major student in the Department of English the student must have credit for the following lower-division courses or their equivalent: English 3, 4, 5, and 6; English 13 or some other course in advanced composition—in all, 14 hours in addition to the general college requirement of 6 hours in English composition (English 1 and 2).

English 3 or English 4 (English 163 or English 164) is prerequisite to all advanced courses in English literature.

English 5 or 6 is prerequisite to all advanced courses in American literature.

A major student will take at least 24 hours of upper-division work in English. The following courses are requirements for English majors: 138, English Literature, 1660-1744; 139, English Literature, 1745-1798; 140, Elizabethan Poetry & Prose; 141, Literature of the 17th Century; 142, Shakespeare; 230, History of the English Language; 254, Chaucer; 133, British Civilization to 1603; 134; British Civilization since 1603. American history, 6 hours, or Humanities 1 and 2, 8 hours. Foreign language, 12 hours, or two units in high school and 6 hours in college. Foreign-language students who plan to take a graduate degree are recommended to take a second foreign language.

The University language requirement will be the language requirement of the English department, i. e., 12 hours in foreign language in college or 2 units for entrance and 6 hours in the same language in college.

Six hours of English history, History 133 and 134 or their equivalent, are also usually required of major students.

Speech 3 or 11 is required of English majors, and a total of no less than 9 hours altogether should be offered in journalism, library science, and speech (9 hours in speech, or 6 hours in any one of the three).

Candidates for the degree of Master of Arts who have not taken English 230, 231, 234, 235 or their equivalent as undergraduates must include these courses in their graduate program. Courses 224 and 291 are also usually required of all English graduate majors.

Candidates for the degree of Master of Arts with major in English must have met the undergraduate requirement of 12 hours of college work in French, German, or Latin.

HONORS IN ENGLISH

Students enrolled in the Department of English, whether major students or not, who maintain an honor-point average of at least 2.0 during their junior and senior years and who complete at least 24 hours of upper-division work in English may qualify as honor students in English and receive a special departmental honor certificate upon graduation. For full information concerning the requirements for honors in English, students should consult the head of the department.

CERTIFICATION WITH ENGLISH AS A TEACHING FIELD

A major in English may meet the requirements for the A.B. degree and also the requirements of the State Board of Education for teachers' certification, with English and French, English and Latin, or English and speech as teaching fields, in four years of eight semesters, provided two years of high-school Latin or French have been offered for entrance credit. In lieu of two entrance credits, additional hours of college work in the languages are required for certification. Other combinations, such as English and social studies or English and physical education, sometimes require somewhat more than four years, and students who desire these combinations should consult the departmental adviser in planning their courses.

COURSES OF INSTRUCTION

Lower Division

1c. English Composition. I, II. 3 Hrs. Three class hours weekly. Required of all students who fail to pass the Freshman English placement test.
Staff

1. **Composition and Rhetoric.** I, II. 3 Hrs. Primarily for freshmen. Required of all candidates for the Bachelor's degree in all the colleges. Not open to upperclassmen. Staff

1A. **Composition and Rhetoric.** I, II. 3 Hrs. Substituted for English 1 for students who make exceptionally high grades on the Freshman English placement test.

2. **Composition and Rhetoric** I, II. 3 Hrs. Continuation of English 1. Primarily for freshmen. Required of all candidates for the Bachelor's degree in all colleges. Not open to upperclassmen. Staff

2A. **Composition and Rhetoric.** I, II. 3 Hrs. Continuation of English IA. For students whose record in freshman English is exceptionally high. Staff

3. **Survey: English Literature.** I, II. 3 Hrs. Survey: study of English authors from Beowulf to Burns and readings from their works. PR: English 1 and 2 or a superior record in the Freshman English placement test. Open only to lowerclassmen. Staff

4. **Survey: English Literature.** I, II. 3 Hrs. Survey: study of English authors from Robert Burns to the present and of readings from their works: PR: English 1 and 2 or a superior record in the Freshman English placement test. Open only to lowerclassmen. Upperclassmen may substitute English 164 for this course. Staff

5. **American Literature.** I, II. 3 Hrs. Survey: study of American authors with readings from their works to 1870. PR: English 1 and 2 or a superior record in the Freshman English placement test. Open to lowerclassmen. Upperclassmen by consent of instructor. Staff

6. **American Literature.** I, II. 3 Hrs. Continuation of English 5. Staff

13. **Expository Writing.** I. 2 Hrs. Not open to upperclassmen. PR: English 1 and 2. Staff

14. **Argumentative Writing.** II. 2 Hrs. Not open to upperclassmen. PR: English 1 and 2. Staff

16. **Descriptive and Narrative Writing.** I, II. 3 Hrs. Not open to upperclassmen. PR: Either English 13 or a grade of at least B in English 2. Mrs. Reed

Upper Division

Credit for at least 9 hours of lower-division English is prerequisite to admission to any upper-division courses.

Sophomores should not register for upper-division courses without special permission of the head of the English department.

Upperclassmen who have failed to obtain credit for required lower-division courses must make special arrangement with the head of the English department to make up the missing credit.

111. **The Research Paper.** I, II. 3 Hrs. Mr. Anderson

115. **Advanced Composition: Creative Writing.** I, II. 2 Hrs. PR: Consent of instructor. Mrs. Reed

123. **Continental Influences on English Literature: Renaissance.** I. 2 Hrs. Mr. Battles

124. **Continental Influences on English Literature: The Romantic Period.** II. 2 Hrs. Mr. Battles

125. **Advanced Composition.** I. 2 Hrs. Designed particularly to meet the needs and interests of students in languages and literatures, social studies, and the arts. Mr. Gainer

126. **Advanced Composition.** II. 2 Hrs. Technical forms of writing designed particularly for students in sciences, Engineering, and Agriculture. Mr. Gainer

127. **The American Language.** II. 2 Hrs. Words and their ways in American speech. Mr. Chappell

138. **English Literature 1660-1744.** I. 3 Hrs. Mr. Bishop and Mr. Crocker

139. **English Literature 1745-1798.** II. 3 Hrs. Mr. Bishop and Mr. Crocker

140. **Elizabethan Poetry and Prose.** I. 2 Hrs. Mr. Smith

141. **Literature of 17th Century.** II. 3 Hrs. Mr. Brawner

142. **Shakespeare.** I. 3 Hrs. Mr. Smith

160. **Contemporary Literature.** I. 2 Hrs. Mr. Smith

161. **Contemporary Literature.** II. 2 Hrs. Continuation of English 160. Mr. Smith

163. **English Literature.** I, II. 3 Hrs. (for Juniors and Seniors) Survey: English literature with special reference to the life, personality, ideas, and influence of ten great English authors. May be substituted for English 3 but may not be elected by students who already have credit for English 3. Staff

164. **English Literature.** I, II. 3 Hrs. (for Juniors and Seniors) Continuation of English 163. May be substituted for English 4 but may not be elected by students who already have credit for English 4. Staff

166. **American Fiction.** I. 3 Hrs. Mr. Brawner

171. **Folk Literature in West Virginia.** I. 2 Hrs. Introductory course in folk games, songs, ballads, and stories of the state. Mr. Chappell

173. **Poetry.** I. 2 Hrs. Mr. Brawner

175. **The Short Story.** I. 2 Hrs. Mr. Bishop

182. **Masterpieces of World Literature.** II. 3 Hrs.. Mr. Crocker

Senior-Graduate Courses

Credit for English 1, 2, and 3 or their equivalent and for at least 3 hours of upper-division English is prerequisite to admission to courses listed below.

221. **Advanced Rhetoric** II. 2 Hrs. Mr. Gainer

222. **Biography.** II. 3 Hrs. Miss Page

224. **Literary Criticism.** II. 2 Hrs. Mr. Crocker

225. **Recent Literary Criticism.** I, II. 2 Hrs. Mr. Foster

226. **Bible Literature: Old Testament.** I. 3 Hrs. Mr. Battles

227. **Bible Literature: The Apocrypha.** II. 3 Hrs. Mr. Battles

228. **Advanced Grammar.** I. 3 Hrs. Mr. Bishop

230. **History of the English Language.** I. 3 Hrs. Mr. Chappell

231. **Old English.** I. 3 Hrs. Mr. Chappell

232. **Beowulf.** II. 3 Hrs. Mr. Chappell

234. **Chaucer.** II. 3 Hrs. Mr. Smith

235. **Shakespeare.** I. 3 Hrs. Mr. Draper

236. **Old English Poetry.** I. 3 Hrs. Mr. Chappell

237. **Metrical Romances.** II. 2 Hrs. Mr. Chappell

239. **Southern Writers.** II. 2 Hrs. Mr. Foster

240. **Special Topics in American Literature.** I, II. 2 Hrs. Miss Sayre

244. **Literature of the Sixteenth Century.** I. 3 Hrs. Mr. Draper

245. **Literature of the Seventeenth Century.** II. 3 Hrs. Mr. Draper

247. **Literature of the Eighteenth Century.** II. 3 Hrs. Mr. Draper

248. **Literature of the Eighteenth Century.** II. 3 Hrs. Mr. Draper

249. **The Romantic Movement.** I. 3 Hrs. Mr. Brawner

250. **American Romanticism** II. 3 Hrs. Mr. Brawner

251. **Victorian Literature.** I. 3 Hrs. Mr. Smith

252. **Modern English Literature. 1881-1918.** I. 3 Hrs. Mr. Crocker

253. **Pre-Shakespearian Drama.** I. 3 Hrs. Mr. Crocker

254. **Elizabethan Drama.** II. 3 Hrs. Mr. Crocker

255. **Restoration and Eighteenth-century Drama.** I. 3 Hrs. Mr. Crocker

256. **Modern Drama.** II. 3 Hrs. Mr. Crocker

259. **Dramatic Art of Shakespeare.** II. 3 Hrs. Mr. Bishop

261. **The Technique of the Drama** I. 2 Hrs. Drama as a literary form; technique of the various types. Mr. Crocker

263. **Study of One Author.** I, II. 2 Hrs. Staff

264. **Spenser.** I II. 2 Hrs. Mr. Chappell

265. **Pope.** I, II. 3 Hrs. Mr. Bishop

266. **Browning.** I, II. 2 Hrs. Mr. Smith

267. **Milton.** II. 3 Hrs. Mr. Gainer

269. **The Metrical Romance.** I, II 3 Sem. Hrs. Mr. ———

270. **American Poetry.** II. 3 Hrs. Mr. Smith

271. **American Drama.** II. 2 Hrs. Mr. Smith

272. **Folk Literature.** II. 3 Hrs. Mr. Gainer

273. **The Folktale and Allied Forms.** II. 3 Hrs. Mr. Chappell

274. **The Lyric.** I, II. 2 Sem. Hrs. Mr. ———

275. **The English Novel to the Time of Scott.** I. 3 Hrs. Mr. Bishop and Mr. Anderson

276. The English Novel, 1832-1918. II. 3 Hrs. Mr. Bishop and Mr. Anderson

277. The Essay. II. 3 Hrs. Mr. Brawner

278. Tragedy. II. 3 Hrs. The tragic spirit in epic poetry, fiction, and drama. Mr. Brawner

279. Satire and Humor. II. 3 Hrs. The comic spirit in English literature. Mr. Bishop

280. The Modern Novel. II. 2 Hrs. Mr. Bishop

286. Modern Women Writers. I. 2 Hrs. Mr. Anderson

291. Introduction to Literary Research. I, II. 2 or 3 Hrs. Mr. Draper

392. Seminar. I, II. 2 or 3 Hrs. Staff

Geology, Mineralogy, and Geography

Professor PRUITT; Associate Professor WELLS; Assistant Professor LUDLAM; Instructor DILLARD

Each student majoring in geology is required to present credit for Geology 266s or its equivalent. The following schedule is recommended:

BACHELOR OF SCIENCE IN GEOLOGY

Majors in Geology working toward the Bachelor of Science degree must have a minor in an allied science. A total of 132 hours is required.

Freshman	*Hrs.*	*Sophomore*	*Hrs.*	*Junior*	*Hrs.*	*Senior*	*Hrs.*
Foreign lang.	6	Foreign lang.	6	Geol. 105	4	Upper-division	
English 1 and 2	6	Geol. 1 and 2	4	Geol. 161	3	courses in	
Mathematics 3	3	Geol. 3 and 4	4	Geol. 184	4	geology and	
Mathematics 4	3	Physics 1 and 3	4	Geol. 204	4	engineering	
Chem. 1 and 2	8	Physics 2 and 4	4	Chem. 105	4	including	
Mil. Sci. 1 and 2	4	C. E. 1	2	Chem. 106	5	Geol. 266s	
Phys. Educ. 1		Mil. Sci. 3 and 4	4	M. E. 20	3	and E.	
and 2	2	Electives (to complete general Arts & Sciences requirements)	6	E. M. 106	1	M. 201	18 to 21
				Electives	6	Electives	12 to 14
	32		34		34		32 to 34

BACHELOR OF ARTS IN GEOLOGY

The requirements for the degree of Bachelor of Arts in Geology are essentially the same as for the Bachelor of Science degree except that the minor subject need not be a science, and less course material in engineering is required. Only 128 hours are required for this degree.

SEQUENCES

Geology 1, 2, 3, and 4 give a general view of the subject.

Geology 1 and 111 introduce rocks and minerals and their uses.

Geology 107 and 109 or 116 and 108 is a combination for students of education.

COURSES OF INSTRUCTION

GEOLOGY AND MINERALOGY

Lower Division

1. **Physical Geology.** I, II. 3 Hrs. A scientific description of the composition and structure of the earth; the physical processes which change the surface of the earth. (Geology 1 must be accompanied by Geology 2 in order to meet the requirements for 4 hours of a laboratory science in physical geology.) Staff

2. **Physical Geology Laboratory.** I, II. 1 Hr. Accompanies Geology 1. Staff

3. **Historical Geology.** I, II. 3 Hrs. PR: Geol. 1. Evolution of the earth and its inhabitants. (Geology 3 must be accompanied by Geology 4 in order to meet the requirements for four hours of a laboratory science in historical geology.) Mr. Wells

4. **Historical Geology Laboratory.** I, II. 1 Hr. Accompanies Geology 3. Mr. Wells

Upper Division

105. **Structural Geology.** I. 3 or 4 Hrs. Shape and position of rock masses in the earth's crust; mechanical principles underlying the various types of rock deformation; indication of the economic importance of deformed rock structures with respect to recovery of mineral products. PR: Geol. 1 and 3. Mr. Ludlum

108. **Natural Resources and Geology of West Virginia.** II. 3 Hrs. A summary of the geology of the state from a historical and economic standpoint. PR: Geol. 1 or 107. Staff

111. **Economic Geology: Nonmetallics.** I. 3 Hrs Occurrence, formation, and use of nonmetallic mineral substances, including ground water, building materials, and chemicals. PR: Geol. 1 and 2. Mr. Ludlum

112. **Economic Geology: Ore Deposits.** II. 3 Hrs. Mineral composition, geological features, and distribution of the deposits of the principal useful metallic minerals. PR: Geol. 1 and 2. Mr. Ludlum

127. **Map Interpretation.** I. 2 Hrs. Relation of earth structure and history to land forms as shown on topographic maps. PR: Geol. 2 and 4. Staff

128. **Map Interpretation.** II. 2 Hrs. Continuation of Geol. 127. PR: Geol. 2 and 4. Staff

161. **Field Geology.** II. 3 Hrs. An introduction to actual field techniques utilized by the geologist in mapping and reporting on the geology of unknown regions. Local areas are studied in detail. PR: Geol. 2 and 4 or equivalent. Mr. Ludlum

184. **Mineralogy.** I. 4 Hrs. The first one-third of the course deals with general principles of mineralogy and crystallography and the last two-thirds is a systematic description of the more important minerals. PR: One year each of chemistry and physics. Staff

204. **Invertebrate Paleontology.** I. 4 Hrs Invertebrat ofossils; their biologic classification, evolutionary development, and use in the correlation of strata. PR: Geol. 3 and 4. Staff

206. Sedimentation. I or II. 3 or 4 Hrs. Origin of sedimentary rocks; principles involved in interpretation of ancient geography, climates, animals, and plants: i.e., basic foundations for stratigraphy. PR: Geol. 1. and 3. Mr. Ludlum

208. Geomorphology. I. 3 Hrs. Study of surface features of eastern United States. PR: Geol. 3. Mr. Fridley

209. Geomorphology. II. 3 Hrs. Continuation of Geology 208. Surface features of the western United States. PR: Geol. 3. Mr. Fridley

211. Geology of Coal, Oil, and Gas. II. 3 Hrs. Origin, geologic distribution, methods of exploration and exploitation, uses, and future reserves of coal, oil, and gas in the world, with special attention to the United States. PR: Geol. 3 and Chem. 106. Mr. Ludlum

266. Field Geology. SI. 6 Hrs. Practical experience in detailed geological field procedures and mapping. Living expenses are in addition to tuition and must be paid on or before registering. PR: Geol. 3 and 161 (or their equivalents). Staff

285. Microscopic Mineralogy. II. 4 Hrs. Principles of optical mineralogy and practice in the use of the polarizing microscope in identification of minerals. Applications to various branches of geology and related sciences are stressed in accordance with the interest of the individual student. PR: Geol. 184. Staff

289. Geologic Problems. I, II. 2 to 4 Hrs. Specialized work for advanced students. Consult departmental adviser before registering. Staff

290. Geologic Problems. I, II. 2 to 4 Hrs. Continuation of Geol. 289. Staff

291, 292. Seminar. I, II. 1 Hr. Mr. Wells

Graduate Division

301. Micropaleontology. I. 4 Hrs. Identification of Foraminifera, Bryozoa, and Ostracoda with aid of the microscope. Emphasis upon classification, nomenclature, and use of paleontological literature. PR: Geol. 204. Mr. Wells

307. Stratigraphy. II. 4 Hrs. Distribution, age and general character of the geologic formations of North America, and their included forms of life. Changing structural features of the continent are noted by use of paleogeographic maps. PR: Geol. 204. Mr. Wells

310. Advanced Economic Geology. I. 3 Hrs. Occurrence, origin, and distribution of mineral products of economic value and the practical application of geologic principles. PR: Geol. 111 and 112. Staff

395, 396. Special Topics. I and II. 1 to 4 Hrs. per semester. Petrography of igneous rocks, sedimentary petrography, invertebrate paleontology, stratigraphy, economic geology, and geomorphology are suggested topics. Staff

397. 398. Research. I, II. 1 to 5 Hrs. Specialized work for advanced students based upon field or laboratory evidence and reported upon in candidacy for advanced degrees. Staff

GEOGRAPHY

Lower Division

12. Meteorology. I, II. 3 Hrs. The physical processes underlying observed weather phenomena. Mr. Fridley

Upper Division

107. **Introductory Geography.** I. 3 Hrs. Relationship between environment and forms of life; emphasis on physiography and climatology. Mr. Fridley

109. **Economic Geography.** II. 3 Hrs. Regional method of treating agricultural, industrial, and commercial development of each of the various countries of the world. Mr. Fridley

116. **Geography of North America.** II. 3 Hrs. The geographic sections of the United States and Canada and a brief survey of each of the Central American republics. Mr. Fridley

Germanic Languages and Literatures

Assistant Professors STROTHER and LEMKE; Instructor STILLWELL

The chief objective of the department is to enable the student to read thoughtful German without the aid of a dictionary. Of German 1, 2, 3, and 4, each is prerequisite to the next following, and the four combined are prerequisite to all other courses except German 111, 112, 121, and 122.

Students majoring in German are advised to base their schedules on upper-division courses from the following subjects, which are listed here in the order of their importance: German, education, English, European history, Latin, Romance languages, modern philosophy, and Greek. Those who are not planning to teach German may omit the courses in education, but the sequence of subjects, from the angle of their desirability for a major in German, remains the same.

COURSES OF INSTRUCTION[1]

Lower Division

1. **Elementary German.** I, II. 3 Hrs. Pronunciation, syntax, reading, composition. Staff

2. **Elementary German.** I, II. 3 Hrs. Staff

3. **Intermediate German.** I. 3 Hrs. Rapid reading of prose by modern authors, memorizing of poems, dictation, composition. Staff

4. **Intermediate German.** II. 3 Hrs. Continuation of German 3. Staff

Upper Division

105. **The German "Novelle".** I. 3 Hrs. Mr. Lemke

107. **Nineteenth Century Drama.** I. 3 Hrs. Critical study of selected dramas by Kleist, Grillparzer, Hebbel, Ludwig. Mrs. Strother

108. **Nineteenth Century Drama.** II. 3 Hrs. Continuation of German 107. Mrs. Strother

111. **Spoken German.** I. 3 Hrs. Practice in speaking and writing. PR: 6 hrs. of German. Mr. Stillwell

112. **Spoken German.** II. 3 Hrs. Continuation of German 111. Mr. Stillwell

121. **Scientific German.** I. 3 Hrs. Primarily for students in science courses. PR: 6 hrs. of German. Mr. Lemke

122. **Scientific German.** II. 3 Hrs. Continuation of German 121. Mr. Lemke

131. **German Composition.** I. 3 Hrs. Practice in writing.

132. **German Composition.** II. 3 Hrs. Practice in writing.

136. **Introduction to Goethe.** II. 3 Hrs. Mrs. Strother

161. **Lyric Poetry (1750-1840).** I. 3 Hrs. Mr. Lemke

162. **Lyric Poetry (1840-1930).** II. 3 Hrs. Continuation of German 161. Mr. Lemke

†211. **Middle High German.** I. 3 Hrs. PR: 12 hours of German from upper division. Mrs. Strother

†212. **Middle High German.** II. 3 Hrs. PR: same as for German 211, and including it. Mrs. Strother

241. **Faust, Part I.** I. 3 Hrs. Open to qualified undergraduates. Mrs. Strother

242. **Faust, Part II.** II. 3 Hrs. PR: German 241. Mrs. Strother

245. **History of German Literature, 1766-1870.** I. 3 Hrs.

246. **History of German Literature, 1870-1914.** II. 3 Hrs. Continuation of German 245.

272. **The Romantic Movement.** II. 3 Hrs. Mr. Lemke

281. **Seminar in Old Norse.** I. 3 Hrs. Elementary study of Old West Norse prose. PR: consent of instructor. Mr. Stillwell

282. **Seminar inOld Norse.** II. 3 Hrs. Readings in various Old Icelandic sagas; introduction to Old Norse poetry. Continuation of German 281. Mr. Stillwell

History

Professors SUMMERS, ENNIS, and SHORTRIDGE; Associate Professors EASTON and KEEN; Assistant Professors BARNS, CARTER, and SMITH; Lecturer LAMBERT

Before graduation history majors are required to complete 18 hours in upper-division courses, including History 276, introduction to historical research and bibliography. Six hours in political science and 6 hours in economics are also required in addition to the special requirements for the A. B. degree. Students who expect to major in history should complete the following subjects, or their equivalents, in their first and second years: English, 6 hours; French or German, 12 hours; history, 12 hours, which should include History 52 and 53 and may include one year's work in either Humanities or Social Sciences general courses; laboratory science, 8 hours; political science, 6 hours; and economics, 6 hours. In planning work in history, students should consult the department in order that advanced courses may be properly correlated as well as suited to individual needs and tastes. One lower-division "year course" or equivalent in history is prerequisite for a major, but prospective majors are advised to take two such courses or History 52 and History 53 and one year of Humanities or Social Sciences general courses.

†German 1, 2, 3, and 4 each is prerequisite to the next following, and the four combined are prerequisite to all other courses with the exception of German 111, 112, 121, and 122, for which German 1 and 2 are prerequisite.

COURSES OF INSTRUCTION

Lower Division[1]

1. European Civilization from the Fall of Rome to the Death of Louis XIV. I, II. 3 Hrs. For Freshmen. Mr. Easton, Mr. Ennis, and Miss Smith

2. European Civilization from the Treaty of Utrecht to the End of World War II. I, II. 3 Hrs. For freshmen. Mr. Easton, Mr. Ennis and Miss Smith

52. Growth of American Nation to 1865. I, II. 3 Hrs. Primarily for sophomores. Mr. Barns, Mr. Carter, Mr. Keen, and Mr. Summers

53. Making of Modern America, 1865 to Present. I, II. 3 Hrs. Primarily for sophomores. Mr. Barns, Mr. Carter, Mr. Keen, and Mr. Summers

Upper Division

101. History of Ancient Times: Stone Age to Fall of Rome.* I. 3 Hrs. Mr. Easton

106. Medieval Europe: Fall of Rome to Renaissance.* I. 3 Hrs. Mr. Easton

†107. French Revolution.* I. 3 Hrs. Mr. Easton

†108. Napoleonic Era.* II. 3 Hrs. Mr. Easton

†109. Social, Cultural Europe, 19th Century.* I. 3 Hrs. Mr. Easton

†110. Social, Cultural Europe, 20th Century.* II. 3 Hrs. Mr. Ennis

114. The Renaissance and the Reformation.* II. 3 Hrs. Mr. Easton

133. British Civilization to 1603. I. 3 Hrs. Miss Smith

134. British Civilization since 1603. II. 3 Hrs. Continuation of History 133. Miss Smith

150. West Virginia. I, II. 3 Hrs. Mr. Lambert

151. American Colonial History. I or II. 3 Hrs. Mr. Barns

164. History of Asia. I. 3 Hrs. Mr. Ennis

180. American Economic History. I. 3 Hrs. Mr. Barns

181. The American Labor Movement. II. 3 Hrs. Mr. Barns

182. History of American Agriculture. I or II. 3 Hrs. Mr. Barns

†207. Europe from Richelieu to Napoleon. I. 3 Hrs. PR: For seniors and graduate students with one year of history, or with consent of instructor. Mr. Easton

†208. Europe from Napoleon to Bismarck. II. 3 Hrs. Continuation of History 207. Mr. Easton

218. The Second World War. II. 3 Hrs. PR: same as for History 207. Mr. Easton

[1]All first and second-year courses are offered as lower-division "year courses." These courses run through the year, but in no case is the first half-year a prerequisite for the second half. For example, History 1 is not a prerequisite for History 2. History 1 and History 2 make up the introductory first year in history. History 52 and 53 are primarily for sophomores. A freshman should not take more than one "year course" at a time.

*PR: one college course in European history, or consent of instructor.

219. History of Russia from Varangians to Bolsheviks. I. 3 Hrs. PR: same as for History 207. Mr. Easton

220. Latin-American History: Colonial Period and Wars of Independence. I. 3 Hrs. PR: for seniors and graduate students with one year of history, or with consent of instructor. Mr. Keen

221. Latin-American History: National Period. II. 3 Hrs. Continuation of History 220. Mr. Keen

231. The British Empire. I. 3 Hrs. Miss Smith

232. Canada. II. 3 Hrs. Mr. Shortridge

†233. Stuart England. I. 3 Hrs. PR: History 134. Mr. Shortridge

†234. Recent Britain. II. 3 Hrs. PR: History 134. Mr. Shortridge

†236. English Constitutional Growth. I or II. 3 Hrs. PR: History 133. Mr. Shortridge

†241. Europe from Sedan to Versailles. I. 3 Hrs. PR: History 1 and 2 or equivalent. Mr. Ennis

242. Europe from Versailles to Nuremberg. II. 3 Hrs. Continuation of History 241. Mr. Ennis

249. The Westward Movement to 1820. I. 3 Hrs. PR: History 52 and 53 or equivalent. Mr. Carter

254. Trans-Mississippi West. II. 3 Hrs. Continuation of History 249. Mr. Carter

†256. The Jacksonian Era. II. 3 Hrs. Mr. Barns

257. Ante-bellum South and War of Secession. I. 3 Hrs. Mr. Summers

258. Reconstruction and National Development, 1865-1898. II. 3 Hrs. Mr. Summers

†259. Recent American History. I or II. 3 Hrs. Mr. Carter

260. American Foreign Policy and Diplomacy, 1776-1898. I. 3 Hrs. PR: History 52 and 53 or equivalent. Mr. Keen

261. American Foreign Policy and Diplomacy, 1893-1947. II. 3 Hrs. Continuation of History 260. Mr. Keen

262. Problems of the Pacific. II. 3 Hrs. PR: History 164 Mr. Ennis

†263. Anglo-American Diplomatic Relations. I. 3 Hrs. Mr. Keen

†264. The United States and Latin America, 1783-1947. II. 3 Hrs. Mr. Keen

265. American Constitutional Development to 1860. I. 3 Hrs. PR: History 52 and 53 or equivalent. Mr. Lambert

266. American Constitutional Development since 1860. II. 3 Hrs. Continuation of History 265. Mr. Lambert

271. Problems of Recent European History. I or II. 3 Hrs. Continuation of History 242. Mr. Ennis

276. Introduction to Historical Research and Bibliography. I, II. 3 Hrs. This course is prescribed in the fourth year for all history majors. Mr. Summers

†Not offered in 1948-49

[1]Seminar courses are for history and social-science majors and admission is only by permission of instructors in charge and should be by their request.

Seminars[1]

301, 302. Thesis. I, II. 2 or 3 Hrs. each semester. Staff

303, 304. Research. I, II. 6 Hrs. each semester. Staff

†320. Social and Political Thought of Latin America. I or II. 3 Hrs. Mr. Keen

†321. Contemporary Latin America. I or II. 3 Hrs. Mr. Keen

†349, 350. Problems in Local and Regional History. I, II. 3 Hrs. each semester. Mr. Summers

†351. American Colonial Institutions. I or II. 3 Hrs. Mr. Barns

†360. Rise of Nationalism in Asia. I or II. 3 Hrs. Mr. Ennis

†361. Contributions of Asia to Western Civilization. I or II. 3 Hrs. Mr. Ennis

†378. Historians of the United States. I or II. 3 Hrs. Staff

†379. Great Historians of Europe. I or II. 3 Hrs. Staff

†384, 385. Problems in British Imperial History. I, II. 3 Hrs. each semester. Mr. Shortridge

†389. Problems in Revolutionary Europe, 1763-1815. I or II. 3 Hrs. Mr. Easton

†390. Problems in European Diplomacy. I or II. 3 Hrs. Mr. Easton

†391. German Ideology from Herder to Hitler. I or II. 3 Hrs. Mr. Easton

Home Economics

Courses in this subject are offered in the College of Arts and Sciences and in the College of Agriculture, Forestry, and Home Economics.

Students in the College of Arts and Sciences who select home economics as a major must complete the lower-division requirements with the following changes (see page 131).

(b) Science: Chemistry, biology, physics, psychology

(f) Electives include Home Economics 1, 2, 3, 4, 18, 33, 50

In the upper division a minimum of 18 hours should be elected (with the help of the adviser) from upper-division courses in home economics. The total hours in home economics must not exceed 36. Further electives should be chosen from the biological and social sciences.

Attention is called to the fact that students who are not interested in the physical and biological sciences may elect Home Economics 1, 2, 3, 4, 18, 33, 50, 134, or 135, 138, 160, 161, and 240.

Students who are preparing to teach home economics must meet the requirements of the State Board of Education and of the College of Education.

The head of the Division of Home Economics in the College of Agriculture is also a member of the College of Education and is the adviser for students wishing to meet the requirements for a high school certificate to teach home economics.

Library Science

Librarian GRIEDER; Assistant Professor REESE

The courses in library science are designed to meet the needs of students preparing to qualify for State certification as teacher-librarians in the public schools. However, certain courses will be of particular value to all students in helping them to find library materials for their class work. The courses "Children's Literature and Story Telling" and "Reference and Bibliography" are of value to all prospective teachers.

No student should select Library Science as a major or teaching field unless he or she has the ability to work well with children and young people and is easily and quickly adapted to new situations. Genuine enthusiasm for and broad knowledge of books are desirable.

COURSES OF INSTRUCTION

Lower Division

1. **Using Books and Libraries.** I, II. 1 Hr. Planned to give a working knowledge of library facilities, particularly of the University Library. Basic reference materials are considered together with simple bibliography making. A general course useful to any student in the University and required for majors in library science.

2. **Teaching Use of Library Aids.** II. 1 Hr. Required course for students planning to take up school librarianship, equally valuable for teachers. Principles and methods of instruction in the use of books and libraries.

Upper Division

101. **Reference and Bibliography.** I. 3 Hrs. Basic reference books, dictionaries, encyclopedias, indexes, year books, and other reference material are studied and evaluated, with practice in detailed bibliography making.

102. **Cataloguing and Classification.** II. 3 Hrs. Fundamental principles of cataloguing and classification, with practical experience in handling all types of books. Problems of teacher-librarians receive special attention.

103. **Children's Literature and Story Telling.** I. 3 Hrs. Survey: books for children approached through subject units which include folklore, poetry, biography, social studies, science. Aids in book selection, illustration of children's books, nursery and picture books, problems and methods in reading guidance, story telling technique with practical experience in telling stories.

104. **Book Selection.** II. 2 Hrs. Reading and evaluation of representative books in broad subject fields; emphasis on contemporary books and adult reading interests. Practical work in use of selection aids and in oral and written book reviewing.

105. **Book Selection for Adolescents.** II. 2 Hrs. Types of literature read by young people of high-school age, methods of directing and stimulating reading interests, wide reading and discussion of books in various fields, evaluation of selection aids. For individuals working with teen-age groups.

†Not offered in 1948-49.

106. **History of Books and Libraries.** II. 3 Hrs. Survey course, including the development of writing, the history of writing materials, the development of the book from early manuscript form, history of printing, printers, illustrators, bindings, and libraries.

107. **Administration of School Libraries.** I. 3 Hrs. Management of school libraries: organization of book collection, housing, equipment and maintenance, practice in simple mending and binding processes, planning instruction in use of books; qualifications and duties of librarian, her relations to school library community and to public library.

108. **Library Practice.** I, II. 3 Hrs. Field Work: embodies application of techniques in various types of libraries. Visits to libraries in surrounding area.

Mathematics

Professors DAVIS, REYNOLDS, and VEHSE; Associate Professor STEWART; Assistant Professors COLE, CUNNINGHAM, MURPHY, PETERS, and VEST; Instructors BAUSERMAN, DAVIS, and SAILE

Students majoring in mathematics must complete 18 hours in mathematics beyond calculus, including Mathematics 240, 241, 251, and 252. The minor may be physics or some other subject approved by the adviser. Physics 105, 106, 107, 108 are recommended. French or German or both should be taken by prospective majors while in the lower division.

COURSES OF INSTRUCTION

Lower Division

2. **Algebra.** I, II. 3 Hrs. PR: 1 unit of algebra and 1 unit of plane geometry. Staff

3. **College Algebra.** I, II. 3 Hrs. PR: 1½ units of algebra or Math. 2, and 1 unit of plane geometry. Staff

4. **Plane Trigonometry.** I, II. 3 Hrs. PR: 1½ units of algebra or Math. 2, and 1 unit of plane geometry. Staff

5. **Analytic Geometry.** I, II. 4 Hrs. PR: Math. 3 and 4. Staff

7. **Solid Geometry.** I, II. 3 Hrs. PR: Plane geometry. Staff

10. **Plane Trigonometry.** II. 3 Hrs. PR: 1 unit of algebra and 1 unit of plane geometry. Staff

Upper Division

106. **Descriptive Astronomy.** II. 3 Hrs. PR: Math. 5. Mr. Reynolds

107. **Differential and Integral Calculus.** I, II. 4 Hrs. PR: Math. 5. Staff

108. **Differential and Integral Calculus.** I, II. 4 Hrs. Continuation of Math. 107. Staff

128. **Mathematical Theory of Investment.** II. 3 Hrs. Primarily for students in economics and business administration. PR: Math. 3. Mr. Reynolds

130. **Elementary Theory of Mathematical Statistics.** II. 3 Hrs. PR: Math. 107. Mr. Reynolds

238. **Modern Synthetic Geometry.** I. 3 Hrs. For high-school teachers. Extension of traditional Euclidean plane geometry. Geometry of points, lines, triangles, and circles; similarity, inversion, poles, and polars. PR: Math. 108 or permission from instructor. Mr. Cunningham

239. **Modern Synthetic Geometry.** II. 3 Hrs. Introductory concepts of projective geometry. Principle of quality, harmonic sets, cross-ratio, conics, involution, and metric properties of projective figures are considered synthetically. PR: Math. 108. Mr. Cunningham

240. **Differential Equations.** I. 3Hrs. First course. Types of ordinary differential equations of first or higher degree and first or higher order. Solutions and applications. PR: Math. 108. Not open to students with credit for Math. 253. Mr. Davis

241. **Theory of Determinants and Analytic Geometry of Space.** I. 3 Hrs. Introduction to theory; application to analytic geometry of three dimensions. Types of algebraic surfaces, particularly quadric surfaces; different coordinate systems. PR: Math. 108. Mr. Cunningham

243. **Projective Geometry.** II. 3 Hrs Homogeneous coordinates, linear one-dimensional forms, cross-ratio, complete quadrangle, two-dimensional forms, perspective, circular points and isotropic lines, line equations, conics, plane collineations. PR: Math. 241. Mr. Davis

244. **Theory of Equations .** II. 3 Hrs. Horner's Method; Elementary symmetric functions; Coefficients of algebraic equations in terms of their roots, elementary substitution groups applied to roots of algebraic equations. PR: Math. 108. Mr. Reynolds

245. **Vector Analysis.** II. 3 Hrs. Vector definitions and operations, differentiation, operator del, integration, generalized coordinates, irrotational and solenoidal vectors, electronstatic fields, potentials. PR: Math. 240 (or 253) and 252 (or 242). Mr. Stewart

246. **Introduction to Algebraic Theories.** I. 3 Hrs. Polynomials, elementary transformations on rectangular matrices, equivalence of forms and matrices, linear spaces, and matric polynominals; groups, rings, and fields. PR: Math. 108 or consent of instructor. Mr. Murphy

247. **Theory of Numbers.** II. 3 Hrs. Divisibility, continued fractions, congruences, quadratic residues, Diophantine equations. PR: Math. 108. Mr. Vehse

248. **History of Mathematics.** I. 3 Hrs. Ancient Near East arithmetic. Euclid's geometry. Algebras of Babylonians, of Cardano and Tartaglia, Non-Euclidean geometry, Descartes work. Contributions of Eudoxus, Newton, and Leibnitz. PR: Math. 5. Mr. Reynolds

251. **Advanced Calculus.** I. 3 Hrs. Elementary functions for complex variables, Taylor's Series, partial differentiation, implicit functions, vectors, curves and surfaces, definite integrals, multiple integration, line integrals, analytic functions, and application. PR: Math. 108. Mr. Stewart

252. **Advanced Calculus.** II. 3 Hrs. Continuation of Math. 251, Beta and Gamma functions, Stirling's formula, elliptic integrals and functions, vector methods, Legendre and Bessel equations, Fourier expansion, applications. PR: Math. 251. Mr. Stewart

253. **Advanced Course in Applied Mathematics.** I. 3 Hrs. Ordinary differential equations; emphasis on linear equations; infinite series, Fourier series, solutions of ordinary differential equations by infinite series. Applications to engineering problems. PR: Math. 108. Not open to students with credit for Math. 240. Staff

254. **Advanced Course in Applied Mathematics.** II. 3 Hrs. Elliptic integrals, Gamma and Bessel functions, partial derivatives, differentiation under the integral sign, partial differential equations, vector, applications to vibrating strings, heat flow, electrical flow. PR. Math. 253. Staff

255. **Mathematical Astronomy.** II. 3 Hrs. Development of the implications of Kepler's Laws and Newton's Law of gravitation. PR: Math. 106 and 240. Mr. Reynolds

257. **Fourier Series and Partial Differential Equations.** I. 3 Hrs. Introductory material, partial differential equations of physics, orthogonal sets; solving boundary value problems by Fourier series and integrals; uniqueness of solutions; Bessel functions, Legendre polynominals. PR: Math. 240 (or 253) and 252. Mr. Vest

258. **Operational Methods in Partial Differential Equations.** II. 3 Hrs. Laplace transformation, properties and elementary applications; problems in partial differential equations, complex variable; problems in heat conduction, mechanical vibrations, etc. Sturm-Liouville systems. Fourier transforms. PR: Math. 240 (or 253) and 252. Mr. Vest

Graduate Division

308. **Theory of Probability.** I. 3 Hrs. Fundamental concepts, probability curve and integral, adjustment of observations. Combinatorial problems. Binomial, normal, multinomial, and Poisson laws. Distributive functions. Moments and characteristic functions. Limits. Applications. PR: Math. 108. Mr. Murphy

309. **Finite Groups.** II. 3 Hrs. Fundamentals of the theory of finite groups; Abelian, prime powers, permutation, and abstract groups. Galois fields. PR: Math. 246 or consent of instructor. Mr. Peters

311. **Point-set Topology.** I. 3 Hrs. Transfinite cardinal numbers, well-ordered sets, transfinite ordinal numbers, closed and perfect sets, measurable point sets in Borel sense; applications to Riemann, Lebesque, integrals, etc. PR: Math. 252. Mr. Reynolds

312. **Introduction to Combinatorial Topology.** II. 3 Hrs. Linear graphs, two-dimensional complexes and manifolds, n-dimensional complexes and manifolds, orientable manifolds. The fundamental group and certain unsolved problems. PR: Math. 252. Mr. Reynolds

313. **Advanced Differential Equations.** II. 3 Hrs. Second course, second-order linear equations, Riccati equations, complex variables. Series solutions. Equations of Fuchsian type, hypergeometric equation, confluence of singularities. Classical equations, applications. PR: Math. 240 and 252. Mr. Vest

314. **Tensor Analysis.** II. 3 Hrs. Vector concept developed from standpoint of algebraic invariants, surface geometry, tensor operators, curvature tensor, Ricci and Bianchi identities, applications of tensors to physical phenomena. PR: Math. 252 and 245. Mr. Stewart

315. **Calculus of Variations.** I. 3 Hrs. Maximum and minimum value of an integral, shortest distance, the brachistochrone problem, surfaces of revolution of minimum area, conditions for a relative minimum. Applications. PR: Math. 240 and 252. Mr. Vehse

360, 361. **Differential Geometry and Theory of Surfaces.** I and II. 3 Hrs. per semester. Metric properties of space curves and surfaces by differential methods. Topics studied include parametric representation, curvature, torsion, trihedrons, geodesics, transformations, conformability, developability, ruled surfaces, etc. PR: Math. 240, 241, 243. Mr. Davis

362, 363. **Introduction to Modern Algebra.** I and II. 3 Hrs. per semester. Group theory, applications, algebra of matrices, linear groups, rank and determinants. Bilinear and quadratic forms. PR: Math. 252, 246.
Mr. Reynolds

364, 365. **Theory of Functions of Complex Variable.** I and II. 3 Hrs. per semester. Complex numbers; functions of a complex variable; fundamentals theorems of Cauchy; conformal representation with applications; analytic continuation; calculus of residues; Gamma, Bessel, and Elliptic functions. PR: Math. 240, 252 (or 242). Mr. Vehse

366, 367. **Higher Plane Curves.** I and II. 3 Hrs. per semester. Algebraic plane curves. General theory of curves, singularities, relationships, associated curves; etc.; detailed study of curves of third and fourth order. PR: Math. 241, 243. Mr. Stewart

370, 371. **Theoretical Mechanics.** I and II. 3 Hrs. per semester. Equations of motion, generalized coordinates, La Grange's equations, calculus of variations, gyroscopic motion, Hamiltonian systems, theory of orbits. PR: Math. 240 (or 253), Physics 232 (or Mech. 104). Mr. Vehse

372, 373. **Line Complexes and Cremona Transformations.** I and II. 3 Hrs. per semester. Line coordinates, null system, systems of complexes, congruences, surface theory, and mapping. Plane Cremona transformations, introduction to general space theory, opportunities for research. PR: Math. 241 and 243. Mr. Davis

374, 375. **Algebraic Surfaces.** I and II. 3 Hrs. per semester Mapping of quadric, cubic, quartic, and quintic surfaces on the plane; space transformations; equivalence, postulation; curves on a surface, adjoint systems, invariants. PR: Math. 267. Mr. Davis

376, 377. **Theory of Functions of a Real Variable.** I and II. 3 Hrs. per semester. Review of elementary point set concepts. Necessary and sufficient conditions under which operations of previous analytical subjects are valid. Different theories of integration. PR: Math. 240 and 252.
Mr. Reynolds

Philosophy and Psychology

Professors WINTER and STALNAKER; Associate Professors CRESSWELL, CURTIS, and MINOR; Instructors SAUNDERS and ROGERSON

There is such wide diversity in the preparation, needs and aims of individual students that the department cannot lay down inflexible rules with regard to sequence of courses.

Introduction to Psychology (Psych. 1) or General Psychology (Psych. 3 and 4) is prerequisite to all other courses in psychology. Philosophy 4 is prerequisite to all other courses in philosophy.

Majors. Students who desire to do their major work in this department should consult with the head of the department before making their decision.

There are various fields of work open to those who major in either philosophy or psychology, some of which are as follows:

Psychology Majors:

1. Teaching psychology in university, college, or normal school.
2. Clinical work in public schools, hospitals, or social service.
3. Vocational guidance.
4. Personnel work in industry.

5. Preparation for certain phases of psychiatry.
6. Consulting psychologist.

Philosophy Majors:

1. Teaching philosophy in university, college, seminary, or normal school.
2. The ministry.
3. General culture for those not planning to undertake a specific type of work.

A major includes at least 24 hours of upper-division work in the department. Students may major in either philosophy or psychology. Students majoring in either of these branches will include at least one course in the other.

The sequence of courses for each major will be arranged so as to give the student the best foundation for the type of work he wishes to pursue.

Related Courses: Various departments offer courses of special value to students of philosophy and psychology. Following is a list of these courses:

For students in psychology: zoology; physiology; neurology; genetics; sociology; education; political science; and economics.

For students in philosophy: classical civilization (Greek life and thought); ancient or medieval history, or both; sociology; at least 12 hours in one of the sciences, or mathematics.

Students whose work shows a marked deficiency in English will be required to take a course in advanced composition.

Majors who look forward to teaching philosophy or psychology should plan to secure at least a Master's degree before applying for a teaching position.

Students who expect to continue their study of philosophy or psychology in a graduate school, either here or elsewhere, are advised to take at least 12 hours of both German and French.

COURSES OF INSTRUCTION

PSYCHOLOGY

Lower Division

1. **Introduction to Psychology.** I, II. 3 Hrs. Not open to freshmen. This course is designed to familiarize the student wth the principal phenomena of mental life, and is prerequisite to all other courses in psychology, except for those who take Psych. 3 and 4.
Mr. Winter and Miss Stalnaker

3. **General Psychology.** I. 4 Hrs. Open to freshmen. Three hours of lecture and quiz and two hours of laboratory per week. Mr. Curtis and Staff

4. **General Psychology.** II. 4 Hrs. PR: Psychology 3. Continuation of Psychology 3. Mr. Curtis and Staff

Upper Division

110. **Applied Psychology.** II. 3 Hrs. A study of the application of psychology to medicine and law. PR: Psychology 1 (or 3 and 4). Mr. Winter

115. **Psychology of Management.** I. 3 Hrs. PR: Psychology 1 (or Psychology 3 and 4). Mr. Curtis

116. **Social Psychology.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Mr. Winter

122. **Child Psychology.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Miss Stalnaker

125. **Mental Hygiene.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4). Miss Stalnaker

130. **Statistical Methods in Psychology.** II. 3 Hrs. Analysis and interpretation of psychological data. PR: Psych. 1 or 3 and 4. Mr. Curtis

132. **Psychology of Advertising and Industry.** II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Mr. Curtis

219. **Clinical Psychology.** II. 3 Hrs. PR: Psych. 1 (or 3 and 4), 122, and 224. Miss Stalnaker

224. **Mental Measurement.** I. 3 Hrs. Individual testing. PR: Psych. 1 (or 3 and 4). Miss Stalnaker

225. **Mental Measurement.** II. 3 Hrs. Group Testing. PR: Psych. 1 or 3 and 4. Miss Stalnaker

226. **Advanced Experimental Psychology.** II. 2 Hrs. Survey of general experimental psychology. PR: Psych. 3 and 4, 150. Mr. Curtis

228. **Personal Psychology.** I. 3 Hrs. PR: Psych. 1 (or 3 and 4), 219, and 225. Miss Stalnaker

229. **Abnormal Psychology.** II. 3 Hrs. PR: Psych. 1 (or 3 and 4), and 116. Miss Stalnaker

230. **Systems of Psychology.** II. 3 Hrs. PR: Psych. 1 (or 3 and 4) and one course in philosophy. Mr. Winter

234. **Problems in Child Psychology.** II. 3 Hrs. Students in this course will be assigned individual problems in child behavior. PR: Psychology 1 (or 3 and 4), and 122. Miss Stalnaker

240. **History of Psychology.** II. 2 Hrs. PR: Psychology 1 (or 3 and 4), and two courses in philosophy. Mr. Winter

245. **Seminar.** I. 2 Hrs. A critical study of the current literature of psychology. PR: Psychology 1 (or 3 and 4) and 116. Mr. Winter

301, 302. **Special problems in research.** I and II. 1 to 3 Hrs. per semester. Staff

303, 304. **Thesis.** I and II. 1 to 3 Hrs. per semester. Staff

PHILOSOPHY

Lower Division

4. **Introduction to Philosophy.** I, II. 3 Hrs. PR: Psychology 1 (or 3 and 4). Staff

Upper Division

106. **Logic.** I. 3 Hrs. PR: Psychology 1 (or 3 and 4), Philosophy 4. Mr. Cresswell

111. **Ethics.** I. 3 Hrs. PR: Phil. 4. Mr. Minor

112. **History of Ancient and Medieval Philosophy.** I. 3 Hrs. PR: Phil. 4. Mr. Cresswell

113. **History of Modern Philosophy.** II. 3 Hrs. Continuation of Philosophy 112, ending with German Idealism. PR: Phil. 4. Mr. Cresswell

114. **Contemporary Philosophy.** II. 3 Hrs. PR: Phil. 4. Mr. Minor

118. **Aesthetics.** II. 3 Hrs. PR: Psych. 1 (or 3 and 4) and Phil. 4. Mr. Minor

124. **Social Ethics.** II. 3 Hrs. PR: Phil. 4 and 111. Mr. Minor

208. **Philosophy of Religion.** I or II. 3 Hrs. PR: Psych. 1 (or 3 and 4), Phil. 4, and 3 hours in another philosophy course. Mr. Cresswell

212. **Seminar in Medieval Philosophy.** II. 3 Hrs. One or more Latin philosophers of the Middle Ages. PR: Psych. 1 (or 3 and 4), Phil. 4, 112. Mr. Cresswell

216. **Contemporary Political Philosophy.** II. 3 Hrs. PR: Psych. 1 (or 3 and 4) and Phil. 4. Mr. Cresswell

217. **Seminar in Metaphysics.** I or II. 3 Hrs. Study of selected system of philosophy. PR: Psych. 1 (or 3 and 4) and Phil. 4, 112, 113. Mr. Cresswell or Mr. Minor

305. **Philosophy of History.** 3 Hrs. Various theories of historical development. PR: Psych. 1 (or 3 and 4), Phil. 4, 106, and consent of instructor. Mr. Cresswell

Physics

Professors COLWELL, MOLBY, FORD, and THOMAS; Assistant Professors BRYAN, CONARD, and WILLIAMSON; Instructors FARR and REXROAD

The various courses offered in physics are designed to meet the needs of the students in the College of Arts and Sciences, Agriculture, and Engineering, the School of Music, and the School of Medicine. All the courses are divided into lower and upper divisions. Majors in physics or mathematics will choose courses from the upper group at the beginning of the third year.

COURSES SUGGESTED FOR PHYSICS MAJORS

FIRST YEAR—English, algebra, trigonometry, introductory physics, French, analytical geometry, some required subjects.

SECOND YEAR—calculus, problems in physics, German, general physical laboratory or chemistry (or radio or photography), speech, some required subjects.

THIRD YEAR—light, electrical measurements, advanced radio differential equations, German, some required subjects.

FOURTH YEAR—modern electrical theory or electricity and magnetism, theoretical mechanics, vector analysis, intermediate physical laboratory.

Lower Division

1. **Introductory Physics.** I. 3 Hrs. Primarily for freshmen. Required of all agricultural students and all students in the School of Medicine. Must be accompanied by Physics 3. Takes up mechanics, sound, and heat. PR: plane geometry and algebra. Mr. Bryan

2. **Introductory Physics.** II. 3 Hrs. Primarily for freshmen. Must be accompanied by Physics 4. Includes electricity, magnetism, and light. PR: Physics 1. Mr. Bryan

3, 4. **Introductory Physical Laboratory.** I and II. 1 Hr. per semester. Primarily for freshmen. Accompanies and is required of all students who take Physics 1 and 2. Mr. Thomas and Staff

17. **General Laboratory.** I, II. 2 Hrs. Primarily for sophomores and juniors. This course is designed to meet the needs of students who desire more laboratory work than that offered in Physics 3 and 4. PR: Physics 3 and 4. Mr. Molby

Upper Division

105. **General Physics.** I, II. 4 Hrs. Required of all candidates for engineering degrees and recommended for all students who major in mathematics. Not open to students who have credit for Physics 1. Physics 107 must accompany. Comprises mechanics, sound, and heat. PR: trigonometry and analytical geometry. Mr. Ford

105A. **General Physics.** II. 4 Hrs. A repeat course for those who have failed in Physics 105.

106. **General Physics.** II. 4 Hrs. Continuation of Physics 105. Not open to students who have credit in Physics 1 and 2. Covers light, electricity, and magnetism. Physics 108 must accompany. Mr. Ford

107, 108. **General Physics Laboratory.** I and II. 1 Hr. per semester. A companion course for Physics 105 and 106. Mr. Thomas and Staff

109, 110. **A Problem Course in General Physics.** I and II. 2 Hrs. per semester. Open to students who have taken Physics 1, 2, 3, and 4, or equivalent; not open to students who have taken Physics 105, 106, 107, and 108. Mr. Williamson

113, 114. **Introductory Radio.** I, II. 3 Hrs. PR: Physics 1, 2, 3, and 4, or equivalent. Mr. Conard

116, 216. **Photography.** II. 3 Hrs. For science majors. PR: college physics; one year college chemistry. Mr. Molby

221. **Light.** I. 3 Hrs. Lectures and laboratory work, designed to meet the needs of students in general biology, chemistry, and medicine. Graduate credit will be allowed to those who are not majoring in Physics. PR: Physics 1, 2, 3, 4, and trigonometry, or Physics 105, 106, 107, and 108. Mr. Molby

225, 226. **Introduction to Modern Physics.** I and II. 3 Hrs. per semester. Especially for students majoring in the natural sciences. Open to all seniors. PR: Physics 1, 2, 3, and 4, or 105, 106, 107, and 108, and Mathematics 3 and 4, or equivalent. Mr. Ford

231, 232. **Theoretical Mechanics.** I and II. 3 Hrs. per semester. Open to seniors. PR: Physics 1, 2, 3, and 4, or 105, 106, 107, and 108, and integral calculus. Mr. Colwell

233, 234. **Introductory Electricity and Magnetism.** I, II. 3 Hrs. Open to seniors. PR: Physics 105, 106, 107, and 108, and integral calculus. Mr. Thomas

241, 243, 245, 247. **Physics Seminar.** I. 1 Hr. Open to seniors and graduates. Discussion of modern research in Physics. Mr. Colwell

242, 244, 246, 248. **Physics Seminar.** II. 1 Hr. Similar to Physics 241. Mr. Colwell

249, 250. **Intermediate Laboratory and Special Topics.** I and II. 2 to 4 Hrs. per semester. Open to seniors who major in physics. PR: Physics 105, 106, 107, and 108, and calculus. Mr. Colwell and Mr. Ford

255s, 256s. Physics Seminar. S, both terms. Selected topics in modern physics. PR: 1 year of college physics; 1 year of college mathematics. Mr. Thomas

261, 262. Matter and Its Constituents. I, II. 3 Hrs. per semester. PR: 1 year of college physics and integral calculus. Mr. Colwell

287. 288. Introduction to Mathematical Physics. I, II. 3 Hrs. per semester. PR: 1 year of college physics and integral calculus. Mr. Colwell

Graduate Division

381, 382. Physical Optics. I, II. 3 Hrs. per semester. PR: Students must have taken courses required of a graduate major in physics or mathematics. Mr. Molby

383, 384. Kinetic Theory of Gases and Molecular Physics. I, II. PR: 1 year of college physics and calculus. Staff

385, 386. Quantum Mechanics. I, II. 3 Hrs. per semester. PR: Calculus and Physics 225, 226, or equivalent. Mr. Thomas

387, 388. Differential Equations of Physics. I and II. 3 Hrs. per semester. Mr. Thomas

389, 390. Nuclear Physics. I, II. 3 Hrs. per semester. PR: All courses required of a graduate physics major including Physics 225, 226, calculus, differential equations, and vector analysis. Mr. Colwell

391, 392. Advanced Electricity and Magnetism. 3 Hrs. per semester. All undergraduate courses required of a physics major plus mathematical training and ability. Mr. Colwell

397, 398. Research. I and II. 4 to 6 Hrs. per semester. PR: All courses for physics major with minor in mathematics; emphasis on ability in experimental work or mathematical calculation. Mr. Colwell

Political Science

Professor FRASURE; Associate Professor STURM; Assistant Professor ROSS; Instructors WHITE and MANN

Students who expect to select political science as their major subject should, while in the lower division, receive credit for Political Science 5 and 6 (106), History 1, 2, 52, 53, and Economics 1 and 2 or Sociology 1. Humanities 1, 2, may be substituted for History 1, 2. Political Science 5 and 6 (106) constitute the basic work in this department and they, or their equivalent, are prerequisite to all courses in the upper division The major requirement is 24 hours in upper-division courses. There should be a first minor of 12 hours in upper-division courses in history or economics and a second minor of 6 hours in upper-division courses in the other subject. With the approval of the departmental adviser, part of the required work in the major may be taken in the College of Law.

COURSES SUGGESTED FOR POLITICAL-SCIENCE MAJORS

FIRST YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
English 1	3	English 2	3
Science	4	Science	4
French or German	3	French or German	3
History 1 or Humanities 1	3 4	History 2 or Humanities 2	3 4
Mil. sci.	1	Mil. sci.	1
Physical educ.	1	Physical educ.	1
	14 to 16		14 to 16

SECOND YEAR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Political Sci. 5	3	Political Sci. 6	3
French or German	3	French or German	3
History 52	3	History 53	3
Economics 1	3	Economics 2	3
Psychology 1 or Sociology 1	3	Philosophy 4	3
Mil. sci. or Physical educ.	2 1	Mil. sci. or Physical educ.	2 1
Elective	2	Elective	2
	18 to 19		18 to 19

COURSES OF INSTRUCTION[1]

Lower Division[2]

5. The Principles and Practices of Government: The American Federal System. I, II. 3 Hrs. Primarily for sophomores. Staff

6. (106). American State and Local Government. I, II. 3 Hrs. Staff

Upper Division

104. Contemporary European Political Institutions. I. 3 Hrs. Staff

107. American City Government. II. 3 Hrs. Miss Mann

200. American Political Institutions. I. 3 Hrs. Mr. Sturm

202. Political Parties and Public Opinion. I. 3 Hrs. Mr. Ross

207. The Administrative Process. I. 3 Hrs. Mr. Sturm

208. The Administrative Process. II. 3 Hrs. Continuation of Course 207. Mr. Sturm

209. The Legislative Process. I. 3 Hrs. Mr. Sturm

210. British Government and Practical Politics. II. 3 Hrs. Mr Frasure

213. Modern Dictatorships. I. 2 or 3 Hrs. Mr. Frasure

219. History of Political Thought: Plato to Machiavelli. I. 3 Hrs Required of majors. Mr. Sturm

220 History of Political Thought: Machiavelli to the Present. II. 3 Hrs. Required of majors. Mr. Sturm

221. Recent and Contemporary Political Thought. II. 3 Hrs. Mr. Sturm

222. American Constitutional Principles. II. 3 Hrs. Mr. White

223. International Law. I. 3 Hrs. Mr. White

260. International Relations. I. 3 Hrs. Mr. Frasure

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[1]Regular elective for Arts and Science students.
[2]These courses are prerequisite to all upper-division work in the department

261. International Relations. II. 3 Hrs. (Continuation of 260.) Mr. Frasure

Graduate Division

301. Methods of Research in Political Science. I. 2 to 4 Hrs. Mr. Frasure

302. Methods of Research in Polotical Science. II. 2 to 4 Hrs. Mr. Frasure

303. Selected Problems in International Relations. I. 2 to 4 Hrs. Mr. Frasure

304. Selected Problems in International Relations. II 2 to 4 Hrs. Mr. Frasure

307. Selected Problems in State and Local Government. I. 2-4 Hrs. Mr. Sturm

308. Selected Problems in State and Local Government. II. 2-4 Hrs. Mr. Sturm

309. Selected Problems in Public Administration. I. 2-4 Hrs. Mr. Sturm

310. Selected Problems in Public Administration. II. 2-4 Hrs. Mr. Sturm

360. Thesis. I and II. 2 to 6 Hrs. Staff

Romance Languages and Literatures

Professors STATHERS, DARBY, and SPIKER; Associate Professors MITRANI, ASHBURN, and MANNING; Assistant Professors MCBRIDE and SINGER; Instructors WADE and HERRERA

Courses 1 and 2 or two years of high-school credit will be required for entrance to courses 5, 6, 103, 104, 107, and 108. Usually students who have had two years' study of the language in high school should take courses 5 and 6. Students who have done three years of work in high school should take courses 107 and 108.

Prospective major students, and students who expect to do more advanced work in language, should not take more than 6 hours in courses 5, 6, 7, and 8.

Students whose grades have consistently fallen below B in language work in the lower division should not select Romance languages as a major subject.

No student who has not completed French 109, 110, 115, 116, and 231 or Spanish 109, 110, 211, 212, 221, and 222 will be recommended as a teacher of these subjects.

In order to be recommended by this Department for the degree of Bachelor of Arts a student must have completed, in addition to special requirements for the A. B. degree, one of the following combinations:

PROGRAM FOR MAJOR STUDENTS

FRENCH: French 109, 110, 115, 116, 221, 222, and 231; Spanish (6 to 12).

SPANISH: Spanish 109, 110, 211, 212, 221, and 222; French (9 to 12 hrs.).

SUGGESTED DISTRIBUTION OF COURSES

FIRST YEAR

	Hrs.
One Romance language	6
English 1 and 2	6
Laboratory science	8
Military science (when required)	2
Electives	8 to 10
	32

SECOND YEAR

	Hrs.
Two Romance languages (6 hrs each)	12
Military science (when required)	2
Electives and lower-division preparation for minor subjects.	18 to 20
	32

THIRD YEAR

	Hrs.
French or Spanish 109 and 110 (if not completed in second year)	6
French 115 and 116 or Spanish 211 and 212	6
Minor subject and electives	20
	32

FOURTH YEAR

	Hrs.
French or Spanish 221 and 222	6
French 231 or elective in Spanish	3
Minor subject and electives	24
	33

COURSES OF INSTRUCTION

FRENCH

Lower Division

1. **Elementary French.** I, II. 3 Hrs. Staff

2. **Intermediate French.** I, II. 3 Hrs. Staff

5. **Contemporary Fiction.** I. 3 Hrs. Staff

6. **Contemorary Drama.** II. 3 Hrs. Staff

Upper Division

103. **Elementary Conversation.** I. 3 Hrs. PR: 6 hours of French, or equivalent. Mr. Stathers

104. **La Langue Pratique.** II. 3 Hrs. PR: 6 hours of French, or equivalent. Mr. Stathers

107. **Advanced Readings.** I. 3 Hrs. Mr. Mitrani

108. **Advanced Readings.** II. 3 Hrs. Mr. Mitrani

109. **Grammar and Pronunciation.** I. 3 Hrs. For sophomores or juniors. PR: 12 hours of French, or equivalent. Staff

110. **Advanced Conversation.** II. 3 Hrs. For sophomores or juniors. PR: French 109 or equivalent. Staff

115. **The Classical School.** I. 3 Hrs. PR: 12 hours of French, or equivalent. Mr. Darby and Mr. Spiker

116. **The Classical School After Moliere.** II. 3 Hrs. PR: French 115. Mr. Darby and Mr. Spiker

217. **Civilsation Francaise.** I. 3 Hrs. PR: French 115 and 116. Mr. Spiker

221. **The Romantic Movement.** I. 3 Hrs. PR: French 115. Mr. Stathers

222. **French Literature Since 1850.** II. 3 Hrs. PR: French 221. Mr. Stathers

223. **The Problem Play.** I. 2 Hrs. PR: French 115 and 116 Mr. Darby

224. Historical Novel in the Nineteenth Century. II. 2 Hrs. PR: French 115 and 116. Mr. Darby

†226. Literary Criticism in 19th Century. II. 3 Hrs. PR: French 221 and 222. Mr. Spiker

†229. Literature of 16th Century. I. 3 Hrs. PR: French 115 and 116. Mr. Spiker

†230. Sixteenth Century After 1550. II. 3 Hrs. PR: French 115 and 116. Mr. Spiker

231. Phonetics and Pronunciation. II. 3 Hrs. PR: 18 hours of French, or equivalent. Mr. Stathers

237. Moliere. II. 3 Hrs. PR: French 115 and 116. Mr. Spiker

†243. Etude du vocabulaire. I. 2 Hrs. PR. French 109 and 110. Mr. Stathers

†244. Explication de textes. II. 2 Hrs. PR: French 109 and 110. Mr. Stathers

†275. Theatre of Eighteenth Century. II. 2 Hrs. PR: French 115 and 116. Mr. Darby

†276. Voltaire. II. 2 Hrs. PR: French 115 and 116. Mr. Darby

†281. Topic in Romantic Period. I. 2 Hrs. PR: French 115 and 116. Mr. Stathers

†282. Topic in Contemporary Period. II. 2 Hrs. PR: French 115 and 116. Mr. Stathers

391. Seminar. I. 2 to 5 Hrs. The origin of French comedy relative to native and foreign elements in its composition. Mr. Spiker

392. Seminar. II. 2 to 5 Hrs. The development of the theory of tragedy before the seventeenth century. Mr. Spiker

395. Seminar. I. 2 to 5 Hrs. Individual study of some subject chosen from the literature of the first half of the nineteenth century. Mr. Stathers

396. Seminar. II. 2 to 5 Hrs. A critical study of some phase of literature of the second half of the nineteenth century. Mr. Stathers

SPANISH

Lower Division

1. Elementary Spanish. I, II. 3 Hrs. Staff

2. Intermediate Spanish. I, II. 3 Hrs. Continuation of Spanish 1. Staff

5. Contemporary Fiction. I. 3 Hrs. Staff

6. Contemporary Drama. II. 3 Hrs. Staff

Upper Division

103. Elementary Conversation. I. 3 Hrs. PR: 6 hours of Spanish, or equivalent. Staff

104. La Lengua Practica. II. 3 Hrs. PR: 6 hours of Spanish, or equivalent. Staff

109. Grammar and Conversation. I. 3 Hrs. For sophomores or juniors. Mr. Ashburn

110. Advanced Conversation. II. 3 Hrs. PR: Spanish 109, or equivalent. Mr. Ashburn

†115 Lyric Poetry. I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn

†116. Civilization and Culture. II. 3 Hrs. PR: 12 hours of Spanish or equivalent. Mr. Ashburn

211. Nineteenth Century Literature to 1870. I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn

212. **Spanish Literature Since 1870.** II. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Ashburn

217. **Spanish American Literature and Culture.** I. 3 Hrs. PR: 12 hours of Spanish, or equivalent. Mr. Mitrani

218. **Spanish American Literature and Culture.** II. 3 Hrs. Continuation of Course 217. PR: 12 hours of Spanish, or equivalent. Mr. Mitrani

221. **Literature of the Golden Age.** I. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Mitrani

222. **The Golden Age after Lope de Vega.** II. 3 Hrs. PR: Spanish 221. Mr. Mitrani

223. **Estudios de Estilo.** I. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Ashburn

224. **Explication de Textos.** II. 3 Hrs. PR: 18 hours of Spanish, or equivalent. Mr. Ashburn

Graduate Division

†391. **Cervantes.** I. 3 Hrs. Mr. Singer

†392. **Special Topics.** II. 1 to 3 Hrs. Themes in Spanish literature and culture. Mr. Singer

†395. **Sixteenth Century Literature.** I. 3 Hrs. Mr. Ashburn

†396. **Old Spanish.** II. 3 Hrs. Mr. Ashburn

ITALIAN

Lower Division

1. **Elementary Italian.** I. 3 Hrs. Staff

2. **Intermediate Italian.** II. 3 Hrs. Continuation of Italian 1. Staff

5. **Contemporary Readings.** I. 3 Hrs Staff

6. **Advanced Readings.** II. 3 Hrs. Staff

Upper Division

†109. **Composition and Conversation.** I. 3 Hrs. Mr. Darby

†110. **Advanced Conversation.** II. 3 Hrs. Mr. Darby

†115. **Italian Literature.** I. 3 Hrs. General survey Mr. Darby

†116. **Italian Literature.** II. 3 Hrs. Continuation of course 115. Mr. Darby

†211. **One Italian Author.** I. 3 Hrs. PR: 12 hours of Italian, or equivalent. Mr. Darby

†212. **Dante.** II. 3 Hrs. PR: 12 hours of Italian, or equivalent. Mr. Darby

PORTUGUESE

Lower Division

†1. **Elementary Portuguese.** I. 3 Hrs. Staff

†2. **Intermediate Portuguese.** II. 3 Hrs. Continuation of Portuguese 1. Staff

†Omitted, 1948-49.

Russian

Instructor KOBZAREFF

1. Elementary Russian. I. 3 Hrs.
2. Elementary Russian. II. 3 Hrs.
3. Intermediate Russian. I. 3 Hrs.
4. Intermediate Russian. II. 3. Hrs.

101. Literature in Translation. I. 3 Hrs.

Social Work

Assistant Professors HOFFMAN, FULTON, and WILSON; Lectures GERCHOW, HELMICK, JOHNSON, LAYMAN, THOMAS, PICKETT, and SENTMAN

PURPOSE

The Department of Social Work provides a professional curriculum for the preparation of competent young men and women to meet the ever-increasing demand for personnel in both public and private social-work agencies. Social work deals with human relationships; its objective is that of helping persons to achieve more satisfying lives both as individuals and as members of social groups. Therefore it is the aim of this department, through carefully selected courses and faculty supervision of all field work, to aid students to acquire of the different areas of social work.

a broad theoretical and practical knowledge, including a historical perspective,

GENERAL STATEMENT

The Department of Social Work is a member of the American Association of Schools of Social Work (the national accrediting body for professional schools of social work) and offers, on a graduate level, a one-year social work curriculum (30 semester hours of work) which leads to a professional Certificate of Social Work. In addition, the department makes available a pre-professional curriculum for juniors and seniors which leads to a B. S. degree with a major in social work. This undergraduate program is designed to prepare students for a few of the beginning positions in social work, but it is established primarily to provide excellent preparation for the graduate curriculum. Students who plan to make social work a life career, who want to be eligible for appointment to the higher positions, or who want to prepare in a specialized field must obtain at least a year of graduate work which leads to the professional Certificate of Social Work. All graduate work, including the field-work courses, may be used to fulfill the class-work and field-work requirements for membership in the American Association of Social Workers.

Professional social-work education is on a graduate basis. The first year's work at West Virginia University, (30 semester hours leading to a professional Certificate of Social Work) requires 10½ months for its completion—one

†Omitted, 1948-49.

semester of classroom work, a semester of field work on a block basis, and a second classroom period of six weeks. In order to make possible the fullest development of graduate professional students during the first year of basic preparation, and in order to utilize selected field centers off the University Campus, the department makes use of a block plan of field work. All students while in field work are responsible for their living expenses and remain with the same agency for the entire semester unless, in exceptional instances and upon the basis of individual need, other plans seem to be more desirable.

Public social services in West Virginia were greatly expanded by the passage of the Federal Social Security Act of 1935 and by the West Virginia Public Welfare Law of 1936. In addition, the postwar period has created an unprecedented demand for new personnel. Case workers and child-welfare workers are needed for state public-welfare departments and private agencies, medical and psychiatric social workers for hospitals and clinics, social-group workers for settlements and community centers, community-organization workers for councils of social agencies and community chests, and administrators for all areas of social work. In other words, there are opportunities today for placement, advancement, and promotion for well-prepared personnel in both the private and public fields of social work.

ADMISSION REQUIREMENTS

Upper Division

Students who have completed 58 or more semester hours of work in an accredited educational institution with at least 12 semester hours in economics, political science, psychology, sociology, or selected courses in history, may apply on the basis of a written application for admission to the Department of Social Work. Application forms should be obtained from the head of the department. If a student is admitted, he may then obtain the third and fourth year of the preprofessional curriculum in the Department of Social Work and will, upon completion of this curriculum, provided he meets other University requirements, be eligible for a B.S. degree with a major in social work.

Each applicant is evaluated on the basis of his scholarship, personality, health, and other characteristics. In addition, the applicant must be willing to provide references, to arrange for a personal interview, if necessary, and to furnish written materials which may be requested.

Graduate Division

Applicants holding a Bachelors' degree from West Virginia University or from other institutions within the state approved by the State Board of Education and authorized to confer such degrees, or from institutions outside the state standardized by membership in one of the associations of colleges and secondary schools, will be considered for admission as graduate students in the Department of Social Work. Candidates should present to the Registrar an official transcript of the credits upon which their Bachelor's degrees are based.

All students entering the graduate professional work must obtain proper application forms from the department. A thorough study is made of each

applicant; such things as scholastic record, personality, health, references, etc., are evaluated. If a student has been accepted for graduate professional work then he must also make application for admission to the Graduate School.

Application for admission to the department should be made at least two weeks before registration. Students may be admitted at the beginning of either the first or the second semester, but students entering at the second semester may not find it possible to obtain an unbroken sequence of courses.

Students who have taken the recommended pre-professional social-work curriculum at West Virginia University will have fulfilled the undergraduate social-science requirements. Students who have not had this undergraduate curriculum are also eligible to apply for admission to graduate professional social work in the department provided they have had an undergraduate background of at least 24 semester hours in the social sciences, including preferably at least 12 semester hours in one of the following fields: economics, political science, psychology, sociology, or selected courses in history.

Students who have not fulfilled these undergraduate social-science requirements may be admitted to the Department of Social Work on condition that they complete the necessary undergraduate requirements before they become eligible for a graduate degree. The head of the department determines the selected courses to meet undergraduate deficiencies.

Students who satisfactorily complete a year of graduate social-work education (30 semester hours) will, provided they meet other University requirements, be entitled to a professional Certificate of Social Work. Such students will meet the educational requirements for a major part of the higher positions in social work, or they will be prepared to obtain the second year of graduate work toward a Master's degree with specialization in generic case work, medical social work, psychiatric social work, child-welfare work, social work, group work, research, or administration.

REQUIREMENTS FOR THE PROFESSIONAL CERTIFICATE OF SOCIAL WORK

The Professional Certificate of Social Work is awarded to graduate students who meet the following requirements:

1. A minimum (including field work) of 30 semester hours of graduate social-work credit.
2. One semester of supervised field work, 10 semester hours of credit, on a block basis in selected social agencies in West Virginia or in nearby states.
3. A grade of C or better in all graduate work.

Field Work

All field work is on a block basis and each student is placed in a public or private social agency in West Virginia or one of the nearby states. Ten hours of credit is granted for one semester of full-time work. The faculty is wholly responsible for the placement of students and through individual con-

ferences, each student is placed in an agency best equipped to meet his particular needs. Field-work placements are made in county and district offices of state departments of public welfare, private case-work agencies, Home Service Departments of American Red Cross chapters, children's agencies, the Veterans' Administration offices, etc. In addition, the Department operates field-work units under the direct supervision of faculty members.

Before placement of a student, the agency supervisor is provided with identifying data concerning the student, and a statement on the classroom work completed, including the reading materials for each course. All students are visited by the faculty supervisor soon after placement, at midsemester, and again near the end of the field experience. The agency supervisors provide midsemester and final evaluations on each student. Joint meetings, which include all agency supervisors, executives, and faculty members, are arranged to discuss policies and procedures desired to provide students with the best possible field work training.

LOANS AND SCHOLARSHIPS

Loan funds and scholarships are available to properly qualified graduate social-work students. For details see Part II, pages 72 to 79.

COURSES OF INSTRUCTION

Upper Division[1]

For fuller description see Department of Social Work Announcements.

220. **The Field of Social Work.** I. 3 Hrs. Introduction to various fields of social work and discussion of the history, scope, organization, problems and methods of each. Mr. Fulton

212. **Field-work Observation.** II. 2 Hrs. Observation of public-welfare administration and casework practice in selected social agencies. Field visits to public-welfare departments, private casework agencies, Federal Social Security Board offices, United States Employment Service offices, health agencies, etc., to observe their structure, scope, and function and to obtain limited participation in each program. PR: Social Work 251. Mr. Fulton or Miss Hoffman

230. **The History of Social Work.** II. 2 Hrs. The European and American social-welfare developments; designed to give the students an understanding of present-day practices and trends of social work. Staff

260. **Problems of Child Welfare.** I. 3 Hrs. Methods, administrative problems, and standards relating to children in foster homes, children born out of wedlock, child-labor problems, children in institutions, child-welfare services, maternal and child-health services, and child adoption problems. Miss Hoffman or Mr. Fulton

251. **Introduction to Social Work.** I. 3 Hrs. Relationships of various professional workers to the problems of understanding and treating human behavior. Miss Hoffman

[1]The pre-professional curriculum also includes Agri. 271, Agricultural Problems and Organizations in West Virginia, II, 2 Hrs.; Home Ec. 160, Problems of Home Management and Family Living, II, 3 Hrs.; and Econ. 105, Public Welfare Accounting, I, 3 Hrs.

274. **Housing.** I. 3 Hrs. Urban and rural housing problems. Special attention to the historical material and current problems such as Federal and State legislation, community planning, new types of houses, tenant selection, methods of finance, legal difficulties, management, etc.
Mr. Saposnekow

285. **Aspects of Public Social Services.** II. 2 Hrs. A discussion of the mentally ill, mental defectives, the physically handicapped, the sick, and delinquents including historical material, current programs of care and the structure, scope, and function of administrative authorities responsible for these groups of disadvantaged persons. **Staff**

Graduate Division

301. **Casework.** I. 3 Hrs. Principles and methods of casework as illustrated by study and discussion of selected cases. Mr. Wilson

302. **Casework.** II. 3 Hrs. Continuation of Social Work 301 with special emphasis on casework in child welfare. PR: Social Work 301.
Miss Hoffman

304. **Community Relationships.** I. 2 Hrs. Community organizing as a process; functions of case worker, group worker, supervisor, and administrator; councils, chests, social-service exchanges, and methods and processes in organizing services for meeting needs. Mr. Fulton

311, 312. **Field Work.** I, II. 5 Hrs. Work on block basis is provided in selected public or private social-work agencies in West Virginia or nearby. Involves responsibility for a limited case load; students also assigned to more complicated problems of family relationships and individual adjustments in rural and urban communities. PR: Social Work 301.
Miss Hoffman and Staff

315. **Principles of Psychiatry for Social Work.** II. 2 Hrs. Normal growth of an individual from the uterine period through infancy, childhood, adolescence, adulthood, old age. Emphasis on how personality development is constantly influenced by physical, emotional, psychological, and social factors and on mechanisms individuals utilize to achieve balance and maturity; causes, diagnosis, and treatment of psychoses, neuroses, and and mental deficiences. Dr. Knapp and Miss Hoffman

320. **Psychiatric Problems of Casework.** II. 2 Hrs. Concepts implied in our understanding of human growth and personality development. PR: Psychology 1 and Social Work 301. Miss Hoffman

344. **Domestic Relations and Allied Problems.** I. 2 Hrs. Selected legal problems such as divorce, non-support, desertion, parent-child relationships, guardianship and custody, adoption, illegitimacy, wage assignments, garnishments, and legal counsel for needy cases.
Mr. Colson and Social Work Staff

351. **Social Statistics.** I. 2 Hrs. Critical evaluation of statistics concerning dependency, mental illness, mental defectiveness, illiteracy, housing, unemployment. Methods of collecting and presenting data; construction of tables and graphs; measures of central tendency, measures of dispersion, relatives, index numbers, measures of variability, time series, simple correlation. Problems are assigned. Mr. Fulton

360. **The Public welfare Services.** I. 3 Hrs. Discussion of scope of public welfare, rise of public responsibility, and evolution and analysis of current pulic-welfare programs. Mrs. Sentman

361. **Social-welfare Administration.** II. 3 Hrs. Administrative principles and processes involved in the organization and operation of social agencies. Special attention is given to budgets; control of expenditures; job analyses; definition of operations; assignment of duties: development of lines of responsibility; coordination of services; staff supervision; relationship of executive to board, staff, and community; use of consultants; intake problems; staff development; ofice management; use of committees; public relations; and research. Staff

364. **Research Methods.** II. 2 Hrs. Discussion of purposes; accepted methods of research including use of documentary sources, case studies, statistical analyses, and social surveys; techniques and tools of research such as sampling, interviewing, schedules, questionnaires, and outlines; editing, coding, and classification; and procedures such as choice of subject, delimiting the field, preparation and use of a bibliography, collection of data, analysis and interpretation of data, and presentation of the results of research. Mr. Fulton

371. **Medical Information.** I. 2 Hrs. Concise information about health and disease, including causes of common diseases and methods of physical examination, diagnosis, treatment. Methods of prevention; social and emotional factors entering into causation and treatment of disability. Presented by faculty members of Medical School and by physicians serving as special lecturers in Department of Social Work . One third of class periods devoted to discussion of social implications of illness and community resources for care and treatment. Field trips to Hopemont Sanitarium and to Monongalia County Health Department.
Medical School Staff, lecturers, and Mr. Fulton

380. **Social Insurance.** II. 3 Hrs. History, principles, method, and problems of workmen's compensation, old-age insurance, unemployment insurance, and health insurance in the United States and European countries. Special attention to problems of coverage, contributions, benefits, methods of financing, administrative difficulties, relationship to public-assistance programs, and recent legislation. Mr. Fulton

Sociology

Associate Professor SAPOSNEKOW: Assistant Professor KERR; Lecturer MATTHEWS

Sociology is an interesting field of knowledge; it is of value in almost all professions and in our daily activities. The work of an undergraduate major in sociology provides basic preparation for social research and teaching the social sciences in high schools and colleges. It is useful for those who plan to do social, personnel, and administrative work in agencies both public and private. It is of especial value for those preparing for the law, medicine, journalism, government service, and other careers. The study of sociology should be an aid to citizenship and intelligent participation in modern life.

COURSES OF INSTRUCTION

NOTE: Sociology 1 or Sociology 102 (or equivalent) is prerequisite to all other Sociology courses.

For Undergraduates Only

1. **Introduction to Sociology.** I, II. 3 Hrs. Basic concepts; fundamental institutions and functions of society. Staff

2. **Contemporary Social Problems.** I, II. 3 Hrs. Survey: current problems, origins, trends, and possible approaches to solutions. Mr. Matthews

102. **Principles of Sociology.** I, II. 3 Hrs. Analysis of nature and operation of our society; formulation of sociological principles. (A first course mainly for upper division students. Not for credit by students with credit for Sociol. 1.) Mr. Saposnekow

103. **Rural Sociology.** II. 3 Hrs. Rural conditions, structures, processes, problems, trends, agencies. Mr. Matthews

105. **Urban Sociology.** II. 3 Hrs. Growth of urbanism, problems of population, health, housing, sanitation, education, recreation, poverty, crime. Mr. Saposnekow

144. **Culture and Personality.** II. 3 Hrs. Significant interrelations between individual and his culture. Mr. Kerr

For Upper-division Undergraduates and Graduates

202. **Introduction to Social Research.** II. 3 Hrs. Trends in social research; examination of methods and techniques. Mr. Kerr

203. **Social Psychology of American Culture.** II. 3 Hrs. Ideological structures, trends, and processes as they affect social attitudes and behavior. Mr. Matthews

204. **Social Stratification.** II. 3 Hrs. Modern society as affected by class and caste. Mr. Kerr

210. **Marriage and the Family.** I. 3 Hrs. Sociological analysis of the contemporary family and its problems. Mr. Kerr

211. **Sociology of Childhood.** II. 3 Hrs. Adjustment of the child to American culture. Mr. Kerr

231. **Race Relations.** II. 3 Hrs. Race in United States; emphasis on American Negro. Mr. Kerr

232. **American Minority Peoples.** I. 3 Hrs. Consequences of immigration; analysis of intercultural conflict and of cultural pluralism. Mr. Saposnekow

233. **Problems of Crime and Delinquency.** I. 3 Hrs. Explanation of crime and delinquency; Critical study of criminal justice, penal methods, and reform movements. Mr. Saposnekow

234. **Social Pathology.** II. 3 Hrs. Description and interpretation of some areas of social inadequacy involving individual and society. Mr. Saposnekow

240. **Social Control.** I. 3 Hrs. Foundations, techniques, agencies, problems of social control. Mr. Matthews

241. **Community Organization.** I. 3 Hrs. Community development in America. Changing bases of local and regional group structures, processes, patterns, programs. Mr. Kerr

243. **Introduction to Anthropology.** I. 3 Hrs. Biological history of man; analytical study of social organization, culture, and intellectual life of primitive man. Mr. Saposnekow

245. **Sociology Since Comte.** II. 3 Hrs. Development of Sociology in Europe and America from 18th century to present. Mr. Saposnekow

246. **Types of Sociological Theory.** II. 3 Hrs. Examination of leading schools of sociological thought in our day. Mr. Saposnekow

247. History of American Sociology. I. 3 Hrs. Development of sociological theory in America. Mr. Kerr

274. Housing. I. 3 Hrs. Urban and rural housing conditions in U. S.; proposed solutions; role of public and private action. (Identical with Social Work 274.) Mr. Saposnekow

For Graduates Only

391. General Seminar. I, II. 3 Hrs. Staff

392. General Seminar. I, II. 3 Hrs. Staff

393. Seminar in Sociological Research. I, II. 3 Hrs. Staff

394. Seminar in Sociolcgical Research. I, II. 3 Hrs. Staff

395. Seminar in Sociological Theory. I, II. 3 Hrs. Staff

396. Seminar in Sociological Theory. I, II. 3 Hrs. Staff

Speech

Professor Henning; Associate Professor Fear*; Assistant Professors Boyd, Cobin, Rundell, and Welden; Instructors Anderson, E. Henning, and Lambert

The curriculum of the Department of Speech is so organized that a student may receive comprehensive training in the cultural and practical aspects of any one or more of six fields of speech: (1) interpretation; (2) public speaking; (3) radio; (4) speech correction; (5) teaching; and (6) theatre. In all courses of training in speech skills, professional standards of achievement are emphasized.

FORENSIC ACTIVITIES. Intramural and intercollegiate forensics, including debate, oratory, and extemporaneous speaking, receive due attention. Speech tournaments, trips, and tours as well as campus contests are included in the program. Participation in these activities may lead to membership in Delta Sigma Rho, honorary forensic fraternity.

THEATRICAL PERFORMANCES. The University Players, in conjunction with the classes in dramatics, present a regular program of plays which affords ample opportunity for student participation. In addition, other public and semi-public performances are scheduled to provide practical experience for less advanced students. Membership in Alpha Psi Omega may be earned by superior work in connection with various productions.

RADIO PROGRAMS. The University Radio Theatre produces a half-hour show, broadcast each week over Station WAJR. All regularly enrolled students in the University are eligible to audition for any of the programs or plays.

OFF-CAMPUS SPEECH SERVICES. The Department of Speech sponsors and furnishes student programs in the form of short plays, speeches, interpretative readings, and debates for off-campus performance before women's and civic clubs, community organizations, and church groups throughout the state.

MAJOR REQUIREMENTS. The minimum number of hours in speech courses for a major is 36, including the following required courses: 3, 6, 11, 29, 50, 120, 121, and 140. The 12 hours of electives taken in addition to these

*On Leave of Absence 1947-48.

courses must all be upper division and should be so chosen as to make a total of 12 upper-division hours (including any upper-division required courses) in a single speech field. Beyond this, the student may elect courses in another speech field provided his total number of hours in speech does not exceed 40.

DISTRIBUTION OF COURSES

The required courses for speech majors should be distributed as follows:

Freshman year:	first semester: Speech 3 second semester: Speech 6, 29
Sophomore year:	first semester: Speech 11, 50 second semester: Speech 120, 140
Junior year:	second semester: Speech 121

TEACHER TRAINING. Speech majors who plan to teach speech and all others who have chosen speech as a second teaching field should select, in addition to the above, courses in their junior and senior years as follows:

Junior year:	first semester: Speech 161,* 162 second semester: Speech 160,* (and 121)
Senior year:	first semester: Speech 221,* 250 second semester: Speech 270

*Advised but not required.

PLATFORM TEST. During the second semester of the sophomore year each speech major shall demonstrate his speech proficiency in a 15-minute platform test at a time and place designated by the head of the department. Passage of this test shall be prerequisite to continue registration as a speech major. Two tests shall be the maximum allowed any student. A student may petition to have any public platform appearance in which he may have occasion to appear judged as his platform test. Satisfactory passage will fulfill this requirement.

COURSES OF INSTRUCTION

Lower Division

3. **Voice and Diction.** I, II. 3 Hrs. Drills for developing proper breath support and for producing a strong, flexible, resonant voice. Coordination of mind and voice. Phonetics. Voices recorded and analyzed, with corrective exercises prescribed. Open to all students.
Mrs. Henning and Miss Anderson

6. **Acting.** I, II. 3 Hrs. Drills for developing muscular control; for overcoming inhibitions; for rendering the body expressive of thought and emotion. Coordination of mind and body. Open to all students.
Mr. Boyd and Mr. Cobin

11. **Public Speaking.** I, II. 3 Hrs. Study and application of the principles of practical public speaking. Training in the composition and effective delivery of speeches for the purpose of developing skill in thinking and speaking before an audience. PR: English 1 and 2. Staff

13. **Public Speaking.** I, II. 2 Hrs. For Engineering students only. PR: English 1 and 2. Staff

29. **Oral Interpretation.** I, II. 3 Hrs. Development of mental and emotional responsiveness to the printed page. Study of recordings of well-known speakers and readers. Practice in reading all types of literature. Open to all students. Mrs. Henning and Miss Anderson

*Advised, but not required, courses.

50. Theatrical Methods and Practices. I, II. 3 Hrs. A lecture-laboratory symposium basic to all upper-division theatre courses. Covers the basic techniques and terminologies of acting, scene construction, lighting, properties and costuming, directing, and theatre history. Participation in the actual production of the University Theatre and Children's Theatre plays gives each student practical experience in producing the play. Required of all speech majors. Mr. Boyd and Mr. Cobin

98, 99. Verse Choir. I, II. 1 Hr. Practice in oral interpretation of literature in group speaking. Miss Anderson

Upper Division

INTERPRETATION

100, 101, 102, 103. Advanced Verse Choir. I, II. 1 Hr. Training in choric speech for public performance. PR: Speech 98 or 99 or consent of instructor. Miss Anderson

104. Advanced Oral Interpretation. I. 3 Hrs. PR: Speech 29. Mrs. Henning

113. Advanced Voice and Diction. II. 2 Hrs. PR: Speech 3 or equivalent. Mrs. Henning

200. The Art of Story-Telling. II. 3 Hrs. Principles involved in effective presentation of stories, with practical experience in the classroom and before audiences. Stories of all types for adults and children studied. Offered 1947-48 and alternate years. Mrs. Fear

201. Oral Interpretation of Poetry. I. 2 Hrs. Alternates with Speech 202. PR: Speech 104. Offered in 1947-48. Mrs. Fear

202. Oral Interpretation of Dramatic Literature. I. 2 Hrs. Alternates with Speech 201. PR: Speech 104. Not offered in 1947-48. Mrs. Fear

203. Professional Reading. II. 2 Hrs. For advanced majors only. PR: Speech 104. Mrs. Fear

Voice and Diction Clinic. I, II. Students in speech courses needing special attention to problems of breathing, voice production, and diction will be given special remedial work in the clinic.

PUBLIC SPEAKING

120 Group Discussion. I, II. 3 Hrs. Theory and practice of the various forms of group discussion. Principles, methods, and types of group discussions, application to contemporary problems. PR: Speech 11. Required of all speech majors. Mr. Welden

121. Argumentation and Debate. I, II. 3 Hrs. Principles of argument, evidence, and reasoning; application to debating. Required of all speech majors. Mr. Welden

125. Advanced Public Speaking. I. 2 Hrs. PR: Speech 11 or equivalent. Mr. Welden

220. Speech Composition. II. 3 Hrs. Materials of speech, organization, and style; application to delivery. PR: Speech 11. Mr. Henning

221. Persuasion. I. 3 Hrs. Study of and practice in the welding of an audience, securing and holding attention, use of suggestion, influencing belief, psychology of motivation, and dramatization of ideas. PR: Speech 121 or equivalent. Mr. Henning

222. **Forms of Public Address.** II. 3 Hrs. Composition and delivery of the oration, the political speech, the speech of introduction, the dedicatory address, and the eulogistic speech. PR: Speech 221. Mr Henning

223. **Advanced Argumentation and Debate.** I. 3 Hrs. Designed primarily for Varsity debaters and Law students. PR: Speech 121. Mr. Welden

224. **Advanced Argumentation and Debate.** II. 3 Hrs. Continuation of Speech 223. Mr. Welden

235. **History of American Public Address.** II. 3 Hrs. Critical study of leading American speakers, their biographies, speeches, and issues with which they dealt. Mr. Welden

239. **Seminar: Problems in Public Speaking.** I, II. 3 Hrs. Mr. Henning

330. **Classical Rhetoric.** I. 3 Hrs. Critical study of early writings in field of speech, their philosophies of composition, organization, style, and delivery of public speeches, debates, and discussion. Open to advanced senior speech majors and graduate students. Mr. Henning

331. **Medieval and Modern Rhetoric.** II. 3 Hrs. Continuation of Speech 330. Mr. Henning

RADIO

140. **Introduction to Radio.** I. 3 Hrs. Microphone technique, operational procedures, broadcasting systems, critical analysis of programs and radio audiences, and FM broadcasting. Required of all speech majors. Mr. Rundell

141. **Radio Announcing.** II. 2 Hrs. Microphone techniques, analysis of audience situations, reading commercials, conducting interviews, announcing news, sports, and special events. PR: Speech 3. Mr. Rundell

142. **Radio Acting.** I, II. 3 Hrs. A beginning course; characterization and interpretation of radio dramas. PR: Speech 140 or consent of instructor. Mr. Rundell

240. **Writing for Radio.** I. 3 Hrs. Practice in mechanics of radio writing, including format, pagination, and typing. Feature and variety programs, unit and serial dramas, and the dramatic narrative are covered. Sources of material, plot, creation of characters, and good dialogue. Mr. Rundell

241. **Advanced Radio Acting.** II. 3 Hrs. PR: Speech 142. Mr. Rundell

242. **Radio Production.** I, II. 3 Hrs. Training in planning and producing the radio show. Participation in University radio programs. PR: Speech 141 and 142 or equivalent. Mr. Rundell

243. **Introduction to Television.** I. 2 Hrs. Miss Anderson

248. **Seminar: Problems of Radio Production.** I, II. 3 Hrs. each semester. PR: Speech 242. Mr. Rundell

249. **Seminar: Problems of Station Management and Operation.** I, II. 3 Hrs. each semester. PR: Speech 140 or equivalent. Mr. Rundell

(See Department of Physics, College of Engineering, and School of Journalism for additional radio courses. Credit for a limited number of these courses can be counted toward a radio major in speech.)

SPEECH CORRECTION

150. **Phonetics.** I. 3 Hrs. Sounds of the English language. Adaptation to interpretation, drama, radio, and speech correction. Mrs. Fear

250. **Speech Correction.** I. 3 Hrs. Defective speech, its causes, methods of diagnosis, therapeutic procedures, and prophylaxis. Mr. Henning

251. **Speech Anatomy.** I. 3 Hrs. Anatomical and physiological study of the speech mechanism. Detailed study of the structures and their functions of the thorax, larynx, pharynx, oral and nasal cavities, and face. Primarily for pre-medical students and students of speech pathology. Mr. Henning

252. **Speech Pathology.** II. 3 Hrs. Theoriees and therapies of severe speech disorders. PR: Speech 251. Mr. Henning

Speech Clinic. I, II. Students in speech courses found to posess speech defects will be required to attend the clinic for diagnosis and treatment. Insofar as time will permit, the services of the clinic will be made available to any student of the University as well as to the general public.

THEATRE

160. **Theatrical Make-up.** I, II. 1 Hr. Mr. Boyd

161. **Stage Craft.** I. 3 Hrs. Problems of plays from the standpoint of the technician. Study of scenery design and construction, lighting, properties, and costumes through lectures, demonstrations, and laboratory. PR: Speech 50. Mr. Cobin

162. **Play Directing.** I. 3 Hrs. PR: Speech 50 and 51. Mr. Boyd

163. **Play Production.** II. 3 Hrs. Integration of various production units, including setting, properties, lights, make-up, costuming, etc. PR: Speech 161. Mr. Cobin

164. **Theatre Workshop.** I, II. 1 to 3 Hrs. For production of University plays and informal stimulation of interest in creative arts. Open to all students. Mr. Cobin

260. **Advanced Acting.** II. 3 Hrs. PR: Speech 6. Mr. Boyd

261. **Studies in Theatrical Dialects.** II. 2 Hrs. Mr. Boyd

262. **Playwriting.** I. 3 Hrs. PR: Speech 50 and 51 and consent of instructor. Mr. Cobin

263. **Scene Design.** II. 3 Hrs. Lecture and laboratory course in theories of scene design for the stage, including practical participation in planning scenery for University productions. Open to juniors and seniors. PR: Speech 161. Mr. Cobin

268. **Seminar: Problems in Acting and Directing.** I, II. 3 Hrs. Mr. Boyd

269. **Seminar: Problems in Play Production.** I, II. 3 Hrs. Mr. Cobin

RELATED COURSES

170, 171, 172. **Extra-curricular Speech Activities.** I, II. 1 to 3 Hrs. The head of the department may grant credit for any extra-curricular speech activity which is assigned and directed by a member of the speech staff. Staff

270. **The Psychology of Speech.** II. 3 Hrs. Psychological principles involved in the speech situation. Analysis of the roles of emotion, habit, learning, judgment, rating, and imagery in speech. PR: 6 hours of psychology and 18 hours of speech. Mr. Henning

275. Spech Problems of Children. Summer Session only. 3 Hrs. Normal development of speech habits in children. Diagnostic and remedial procedures for the speech defective are studied. Consideration to relationship between speech and allied activities such as reading, spelling, and disciplinary problems. Mr. Henning

301. Research Problems and Methods. I. 3 Hrs. PR: Graduate standing. Mr. Henning

370. Research. I, II. 1 to 3 Hrs. For graduate students preparing a thesis or dissertation. Mr. Henning and Staff

375. Independent Study. I, II. 1 to 3 Hrs. Open to graduate sttudents with consent of the department of major interest. Individual programs of study Mr. Henning

399. Thesis. I, II. 2 to 4 Hrs. Mr. Henning

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The College of Education

FUNCTIONS

Through its undergraduate courses, its seminar, its laboratory schools, and its encouragement and direction of education investigation and research, the College of Education aims to contribute to the educational efficiency of West Virginia by inculcating a liberal and more scientific conception of the functions of the public schools of the state and by providing the professional training of secondary-school teachers, principals, and supervisors, elementary-school principals and supervisors, city-school administrators, county superintendents, college teachers, educational counselors, and educational research specialists.

ORGANIZATION

The College of Education comprises the College with its resident courses of instruction and its facilities for research; the University Demonstration High School with its opportunities for observation, student teaching, directed supervision, and experimentation; and the Laboratory Elementary School with its opportunities for graduate study of the progress of pupils.

The Standing Committees

SCHOLARSHIP: MESSRS. WHEAT and COOK and MISS POLLOCK
LIBRARY: MESSRS. BALDWIN, FEDERER, and WHEAT

Pre-Education Adviser

The degree of Bachelor of Science in Education requires four years of college work, the first two years of which are done in the College of Arts and Sciences under the supervision of Prof. Elizabeth M. Stalnaker, pre-Education adviser. The student registers in the College of Education for the last two years.

Transfer Students

Applicants from junior colleges, normal schools, teachers colleges, colleges, other universities, or other colleges within this University will, upon receipt of official transcript, be admitted to this College with equal standing, provided the transcript shows graduation from a standard high school and the completion of 58 semester hours of approved freshman and sophomore work with an average of at least 1 honor point per credit hour on all work presented. Students from other colleges who contemplate transferring to this College should so order their courses of study as to meet junior standing and should be fulfilling the curricular requirements for the certification of teachers as stated in the latest revision of the Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

ADMISSION

The requirements for admission to the College of Education are (1) graduation from any approved curriculum in a first-class high school and (2) 58 semester hours of approved college work with an average of at least one honor point per credit hour on all work presented.

Upper-division Advisers

Each junior and senior in the College of Education will be assigned an adviser who is a member of the College staff.

REQUIREMENTS FOR GRADUATION

To be eligible for recommendation for the degree of Bachelor of Science in Education, a candidate must:

1. Comply with the general regulations, as announced in the General information section (Part II) of this Catalogue, concerning entrance, advanced standing, classification, examination, marks, honor points, etc.

2. Satisfy the General Requirements for certification, listed in the above Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

3. Complete the required 20 semester hours of approved courses in Education, listed in the above Bulletin.

4. Select and pursue two teaching fields.

5. Adhere to the patterns, listed in the above Bulletin, in completing the prescribed number of hours in each teaching field.

6. Present 128 semester hours of approved college credit, with a general average of 1 honor point per credit hour and with an average of 1 honor point per credit hour in each teaching field and in Education. (Only credit earned in West Virginia University will be used in computing honor points for graduation). At least 100 of the 128 hours must be in academic subjects. Two hours of school health or hygiene may be included in the 100 hours. The candidate must have been enrolled in the College of Education for at least 26 credit hours.

7. Be at least 18 years of age, of good moral character, interested in educational work, and mentally, physically, and otherwise qualified to perform the duties of a teacher.

Fulfillment of the requirements for graduation from the College of Edu-

cation qualifies a candidate to apply for recommendation for a West Virginia first-class secondary-school teaching certificate. For instruction on applying for a state certificate, see the above Bulletin.

THE COURSES OF INSTRUCTION

Courses in Education are open only to students of junior, senior, and graduate standing. The following courses are required of high-school teachers for recommendation for a first-class certificate: Junior year, Ed. 106, 109, and 2-4 hours of approved electives; Senior year, Ed. 120, 150-170, 214, 224 and enough additional hours chosen from the following approved electives to meet the minimum requirement of 20 hours in Education: Ed. 101, 212, 136, 197, 203, 221, 222, 231, 233, 252, 281, 282, 284, 285, 291, 150-170 in a second teaching field, 224B (3 hrs.) in a second teaching field, and Psych. 1 (2 hrs.).

Instructors

Professors ALLEN, BALDWIN, HUDELSON, NOER, PARSONS, POLLOCK, STEMPLE, and WHEAT; Professor Emeritus L. B. HILL; Associate Professors COOK and C. W. HILL; Assistant Professors BROWN and COLEBANK: Instructors BIBLE, BOGGESS, BRENNAN, BROCHICK, BROWN, COPLIN, EICHER, FEDERER, FIZER, FULL, GATES, RAPKING, ROLLER, WATSON, WILT, and WOOFTER; Instructor Emeritus SOUPART; Teachers BALIKER, CARRICO, DORSEY, HAYHURST, PESTUN, PROUDFOOT, ROBINSON, SEMON, SMREK, WASMUTH, and WATSON

NOTE: For the kinds of graduate certificates for which the following courses are required or approved see page 211, and for the undergraduate certificate see the Bulletin, **Requirements Applicable to Degrees and to Teacher Certification.**

Undergraduate Division

101. Introduction to Vocational Teaching. II. 2 Hrs. A survey of the field of vocational education with particular emphasis on orientation as the foundation for occupational preparation. Mr. Allen

102. Hand Woodworking. 3 Hrs. I. Basic for prospective industrial-arts teachers. Use of most hand tools found in school shops, development of school-shop projects, and basic finishing information. Mr. Brennan

103. Machine Woodworking. 3 Hrs. II. Use of common pieces of power woodworking equipment and safety factors involved in their use in school shops. Mr. Brennan

106. Introductory Educational Psychology. I, II, 3 Hrs. Introduction to the nature and development of the organized studies of the school. Staff

109. Secondary Education. I, II. 2 Hrs. Introduction to secondary-school teachers' problems of organization and administration not including instructional matters. Staff

115. Student Teaching in Elementary-school Music. I, II. 2 Hrs. Observation and practice of teaching music to pupils in grades one to six in the University Laboratory Elementary School. Open to seniors in the School of Music who have completed 27 hours in Music and 7 semester hours

in Education with an honor-point average in each and a general honor point average of 1.0. Opportunity for observation and practice is limited to one class period (one-half hour) each day each semester for 4 students. Attendance is required on alternate days, when instruction in Music is given, in each of the two classrooms of the Laboratory Elementary School. Miss Wasmuth, Mr. Brown

116. **Psychology of Elementary-School Subjects.** I, 2 Hrs. The essential phases and features of the subjects and the types of learning represented in each.

117. **Materials and Methods of Elementary School.** II. 2 Hrs. The relations between content and method in each of the various subjects and the use of materials of instruction.

120. **Principles of Teaching in Secondary Schools.** I, II. 2 Hrs. Open only to those who qualify for the student teaching block. Mr. Cook

130. **Materials and Methods in Elementary-school Music.** I, II. 1 Hr. (To be carried simultaneously with Education 115). Miss Wasmuth, Mr. Brown

135. **The Elementary-school Curriculum.** 2 Hrs. Mr. Wheat

136. **High-school Program of Studies.** I, II. 2 Hrs. Principles governing the selecting of subjects and subject matter for secondary schools with special emphasis on possibilities within given subjects. PR: Ed. 109. Mr. Hudelson

150-170. **Materials and Methods of High-school Teaching.** I, II. 2 Hrs. Special methods in the various secondary-school teaching fields. For West Virginia certification these courses are an integral part of Ed. 224. May also be chosen as a two-hour elective by students who are registered for student teaching in other fields.

The various sections of this course, with their instructors, follow:

150. **Biology.** I, II. 2 Hrs. Mr. Rapking
151. **Science.**[1] 2 Hrs. Mr._____
152. **Physical Education.** I, II. 2 Hrs. Mr. Eicher, Mr. Fizer, and Mrs. Hayhurst
155. **Library Science.** I, II. 2 Hrs. Miss Robinson
160 **Agriculture.** I, II. 3 Hrs. Mr. Bible, Mr. Hill, and Mr Parsons
161. **English.** I, II. 2 Hrs. Miss Brochick, Mr. Full, Miss Smrek, and Miss Woofter
163. **Home Economics.** I, II. 2 Hrs. Miss Boggess
164. **Industrial Arts.** I, II. 2 Hrs. Mr. Brennan
165. **Mathematics.** I, II. 2 Hrs. Miss Wilt
166. **Physical Science.** I, II. 2 Hrs. Mr. Federer
167. **Social Science.** I, II. 2 Hrs. Miss Coplin and Miss Gates
168. **Art.** I, II. 2 Hrs. Mrs. Roller
169. **Music.** I, II. 2 Hrs. Mr. Brown and Miss Wasmuth
170. **Commerce.** I, II. 2 Hrs. Miss Watson

[1] A special section available as an elective for those selecting some science as a second or third teaching field. All branches of science are considered. Registration not necessarily concurrent with Ed. 120 and 224.

197. **Survey of Vocational Education.** I. 2 Hrs. The relationship to each other and to the public-school program of vocational agricultural, vocational home economics, trade and industrial education, commercial education, distributive education, rehabilitation, and re-education. Mr. Allen

203. **Organization and Administration of Adult Education.** II. 2 Hrs. Mr. Allen

204. **Advanced Woodworking, Construction, and Finishing.** 3 Hrs. PR: Elementary woodworking. Selection of advanced projects, analyzing construction planning and finishing, application of machine tools.

205. **Advanced Crafts Work.** 3 Hrs. PR: Ed. 103 or equivalent. Planning and executing same for projects involving art metals, leather, plastics, etc. as used in special courses in industrial arts.

206. **Industrial Experience.** 2 to 5 Hrs. Open only to students qualifying to teach industrial arts. Evaluation of educative outcome of personal employment in industry as determined by duration, experience records, study on job, and final examination.

212. **Techniques of Education Evaluation.** I, II. 2 Hrs. Method of comparing educational products and facilities and making estimates essential in school planning and guidance. Mr. Hudelson

214. **Advanced Educational Psychology.** I, II, 2 Hrs. PR: Education 106. Not open to juniors. Types of learning activities featured in the major subjects of the secondary school. Mr. Baldwin, Mr. Wheat

221. **Audio-visual Resources for Instruction.** I, II. 2 Hrs. Uses of sensory techniques in teaching. Restricted to seniors and graduates. Mr. Allen

222. **Current Practices in Secondary Education.** I, II. 2 Hrs. Miss Pollock

224, 224B. **Student Teaching.** I, II. 3 Hrs. each. PR: This course is open only to seniors and graduate students regularly enrolled in the University meeting following requirements:

1. Completion of approximately 75% of hours required in each of two teaching fields and completion of Ed. 106, 109, and one other approved course in Education, with a minimum general honor-point average of 1.0 and a minimum average of 1.0 in each teaching field and in Education.
2. This course must be taken simultaneously with Ed. 120 and the appropriate course of Ed. 150-170 unless exceptions have previously been made with Mr. Cook.
3. All students must reserve 7 to 9 PM, bi-weekly, for teachers' meetings.
4. Because two thirds of the program of the University Demonstration High School is in forenoon, two thirds of applicants must schedule this course in the morning, reserving a full half day without interruption.
5. Admission is by application made early in the preceding semester to Prof. Kermit Cook, 105 Woodburn Hall, who alone will give permission to enroll when requirements are met.
6. The adviser is responsible for furnishing a check of the student's record to determine eligibility.

Mr. Cook, Mr. Colebank, Mr. Parsons or Hill, and U. H. S. staff

231. **Philosophy of Education.** I. 2 Hrs. PR: Five hours of Education courses and senior standing. Evaluation of educational theories and practices in terms of several judgments of ultimate worth set up by man in his endeavor to understand life's real meaning. Mr. Baldwin

233. **Educational Sociology.** II. 2 Hrs. PR: Five hours of Education courses and senior standing. Impacts of institutions of society upon school, and schools counter-impacts upon social institutions and agencies. Mr. Baldwin

251. **Cinematography.** 2 Hrs. Practical participation in planning and producing motion pictures for use in teaching, for supporting the school's public-relations program, and in educational research. PR: Ed. 221. Mr. Allen

258. **Education for Special Groups.** II. 2 Hrs. A study of the techniques and organization of instruction of adults and teen-age youth not in attendance at ordinary day-school classes. Part-time, evening, and dull-season classes are among the educational projects considered. Mr. Allen

262. **Vocational Home Economics in Secondary Schools.** I, II. 2 Hrs. PR or parallel: Ed. 120, 163, and 224; home economics, 25 hours. Primarily for seniors and teachers of home economics. Miss Noer

266. **Adult Education in Homemaking.** I, II. 2 Hrs. Current trends and present activities in the field of adult education. Organization of adult classes, development of unit outlines; consideration of teaching methods; illustrative material and bibliography for use in adult classes. Staff

276. **Methods in Special Vo-Ag Projects.** II. 2 Hrs. Participation in conducting young and adult-farmer classes and school canning plants: organization, course of study, methods of teaching, and supervision. PR: Ed. 160. Mr. Parsons or Mr. Hill

277. **Organizing and Directing Supervised Practice Programs in Vocational Agriculture.** II. 2 Hrs. Planning programs of supervised practice, supervising, and evaluating such programs for all-day, part-time, and evening-school students. Mr. Parsons or Mr. Hill

278. **Planning the Programs and Organizing the Courses for Departments of Vocational Agriculture.** I. 2 Hrs. Involves gathering data and studying the farming problems and practices; for all-day, part-time, and evening-school students. Mr. Parsons or Mr. Hill

281. **History of Elementary and Secondary Education in the United States.** I, II. 2 Hrs. Mr. Cook

282. **Development of Modern Education.** I. 2 Hrs. Comparative study of schools in the leading nations of Europe since 1800. Miss Pollock

284. **Pupil-personnel Administration.** I. 2 Hrs. Pupil accounting, guidance, extra-curricular activities, and control. PR: Ed. 106. Open only to seniors and graduates. Mr. Allen

285. **The Junior High School.** II. 2 Hrs. PR: Ed. 106 and 109. Open only to seniors and graduates. Mr. Hudelson

291. **Exploratory Reading.** I, II. 2 Hrs. For those who feel need for wider acquaintance with books. Miss Pollock

294. **Organization of Industrial Arts.** I. 2, Hrs. An advanced course. Preparation of comprehensive programs of industrial arts at all scholastic levels. Mr. Allen

Graduate Division

304. **Remedial Techniques in Elementary-school Subjects.** 2 Hrs. PR: 10 semester hours undergraduate credit in elementary education. Methods and materials useful in aiding retarded and failing pupils.

305. **County Educational Clinic.** 2 Hrs. PR: 6 graduate hours of elementary education and consent of instructor. Procedures of providing and managing clinical services needed in larger school areas.

306. **Supervision of Geography.** 2 Hrs. PR: 10 hours undergraduate credit in elementary education. Methods of directing teachers in organizing content of geography for pupils.

307. **Supervision of Health, Safety Programs in Elementary Schools.** 2 Hrs. PR: 10 hours of undergraduate credit in elementary education. Management of health and safety provisions needed by population of a school and development of program of health instruction.

308. **The Psychology of Arithmetic.** 2 Hrs. PR: 10 hours of undergraduate credit in elementary education. Processes of number thinking and sequential steps of their development among pupils.

309. **The Psychology of Reading.** 2 Hrs. PR: 10 hours of undergraduate credit in elementary education. Progress through grades in art of reading; direction of attention required at different stages.

316. **Psychology of Elementary-school Subjects.** 2 Hrs. PR: 10 hours of undergraduate credit in elementary education. Distinguishing features of various subjects, types of learning activity they require, and sequences characteristic of each.

322. **Organizing Programs of Audio-visual Instruction.** 2 Hrs. PR: Ed. 221. An advanced course dealing with problems of planning extensive programs of using movie, talkie, radio, slides, charts, exhibits, etc., for instructional purposes. Mr. Allen

326. **Practice in Supervision of Elementary-school Instruction.** 2 Hrs. PR: 6 graduate hours of elementary education and consent of instructor. Observing and practicing major activities of supervisor in work with pupils and teachers.

327. **Demonstration and Practice in the Supervision of Secondary-school Instruction.** II. 2 to 3 Hrs. PR: Consent of instructor. Opportunity to observe approved processes in classroom supervision and to practice, under guidance, art of improving classroom instruction. Mr. Cook

335. **The Elementary-school Curriculum.** 2 Hrs. PR: 10 hours of undergraduate credit in elementary education. Organization of content and materials of instruction of subjects through the grades.

336. **The Secondary-school Curriculum.** I. 2 Hrs. PR: high-school teaching experience. Principles of and practice in curriculum construction for modern high school. Mr. Hudelson

339. **Public-school Organization and Administration.** I. 2 Hrs. An orientation course for present and prospective school administrators, with emphasis upon the problems which grow out of the county unit. Required as a basic course of all who specialize in educational administration. PR: 20 hours of Education and consent of instructor. Mr. Baldwin

340. **Public-school Finance.** II. 2 Hrs. PR or conc: Ed. 339 and consent of instructor. Sources of school support; taxation; efficient management of school money: locally by improved budgetary practices in state by more adequate apportionment plans. Mr. Baldwin

341. **School Buildings and Equipment.** I. 2 Hrs. PR or conc: Ed. 339 and consent of instructor. Philosophy, planning, and management of school plant as appropriate physical environment—the home—of pupils for effective learning. Mr. Baldwin

343. **School Surveys.** 2 Hrs. Development of the educational survey as an instrument for improving educational procedures. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

344. **Staff-personnel Administration.** II. 2 Hrs. Selection, induction, direction, evaluation, improvement, and promotion of members of the supervisory, instructional, research, clerical, and maintenance staffs. PR or parallel: Ed. 339 and consent of instructor. Mr. Baldwin

346. **Principles of Supervision.** II. 2 Hrs. Basic; general principles of elementary-school, junior high-school, and senior high-school supervision. Mr. Cook

353. **The Secondary-school Principal.** II. 2 Hrs. PR: Ed. 339, high-school teaching experience, and consent of instructor. Open only to graduate students in Education. Practicum in secondary-school administration. Mr. Hudelson

356. **The Elementary-school Principal.** 2 Hrs. PR: 6 graduate hours of elementary education and consent of instructor. Work of principal in management and supervision of school.

357. **Organization of Programs in Vocational Education.** 2 Hrs. Specific consideration of the development of practical training in agriculture, home economics, industry, and commerce with particular reference to their common elements and interdependence. The contribution in method and set-up which vocational education has made to current emergency programs. PR: Ed. 339. Mr. Allen

360. **Problem in Education.** I, II. 3 Hrs. One of the alternative requirements for the Master's degree in Education. (See Thesis or Option, below). Staff

362. **Thesis in Education.** I, II. 6 Hrs. One of the alternative requirements for the Master's degree in Education. (See Thesis or Option, below). Staff

364. **Advanced Methods in Teaching Industrial Arts.** 2 Hrs. PR: Ed. 294. Current developments and research in field.

367. **Teaching Social Studies in Elementary and Secondary Schools.** I. 2 Hrs. Advanced methods of teaching, practice in curriculum construction, and critical evaluation of social-studies teaching as revealed through significant research. PR: Consent of instructor.

372. **Statistical Methods in Education.** I. 2 Hrs. PR: 20 hours of Education. Mr. Hudelson

373. **Basic Course in Principles and Practices of Guidance.** 2 Hrs. Overview of an adequate guidance service. Ed. 271s, given in summer 1945, 1946, and Ed. 252 may be used for this.

374. **Counseling Techniques.** 2 Hrs. Study of and practice in techniques of counseling. Ed. 271s (2), summer 1946, may be counted for this.

375. **Individual Inventory Techniques.** 2 Hrs. Tests, cumulative records, standards of achievement, and other means of individual measurement to interpret students' individual aptitudes. PR: Ed. 373, 374.

376. **Occupational Information Techniques.** 2 Hrs. Surveys and analyses to determine the needs, possibilities, and requirements of specific employment.

377. **Special Counseling Problems.** 2 Hrs. Individual or group problems, chosen by the students and approved by the instructor, will be pursued through guided reading, observation, and discussion. PR: Ed. 375, 376.

390. **Advanced Course for Teachers of English.** 2 Hrs. PR: Consent of instructor. Miss Pollock

392. **Materials for General Reading.** II. 2 Hrs. Study of materials for secondary schools and for adult classes. PR: Ed. 291. Miss Pollock

399. **Techniques of Educational Research.** II. 2 Hrs. PR: Ed. 372 and consent of instructor. Application of research techniques to problems of modern education; analysis and implications of results. Mr. Hudelson

Optional Routes Toward a Master's Degree with a Major in Education

A. Thirty semester hours, including six semester hours of research (Education 362, Thesis) and the remaining hours in approved course work. Examination (oral, written, or both, at the discretion of the individual members of the committee) by the candidate's advisory committee.

B. Thirty semester hours, including three semester hours on a problem (Ed. 360, Problem) satisfactory to the adviser only, and 27 semester hours of approved course work. Examination (oral, written, or both, at the discretion of the individual members of the committee) by an advisory committee of three from the College of Education.

C. Thirty-six semester hours, including a minimum of 10 semester hours

of approved course work outside the field of Education. A maximum of six semester hours may, by prior written agreement with adviser and Graduate Council, be accepted from an approved institution other than West Virginia University, provided the total of all work for the Master's degree by extension and from another institution shall not exceed 15 semester hours. Examination (oral, written, or both, at discretion of adviser).

Special Requirements for the Completion of Graduate Degrees in Education

Curriculum: At least 10 of the required 30-36 hours of approved graduate work shall be in Education; and the combined undergraduate and graduate curriculum shall contain a minimum of 30 semester-hours of Education.

GRADUATE PROFESSIONAL CURRICULA

Requirements for Admission to Graduate Work in Education

1. General requirements for admission to the Graduate School.
2. First-class teaching certificate or at least 14 hours of undergraduate credit in Education.

The Curriculum for Superintendents Leading to the Degree of Master of Arts

Required for Master's degree ..... 22 Hours

Ed. 231. Philosophy of Education, OR Ed. 233, Educational Sociology
Ed. 316. Psychology of Elementary-school Subjects
Ed. 326. Practice in the Supervision of Elementary-school Instruction
Ed. 335. The Elementary-school Curriculum, OR Ed. 336, The Secondary-school Curriculum
Ed. 339. Public-school Organization and Administration
Ed. 340. Public-school Finance
Ed. 346. Principles of Supervision
Ed. 353. The Secondary-school Principal
Ed. 356. The Elementary-school Principal
Ed. 372. Statistical Methods in Education
Ed. 399. Techniques of Educational Research

Electives in Education for Master's degree (to be chosen with adviser's approval) ..... 4 Hours

NOTE:—For those who already hold a Master's degree and who wish to qualify for the University's recommendation for a Superintendent's Certificate, the following courses listed above will satisfy:

Required ..... 16 Hours
General Administration: Ed. 339; 340; 203 or 357; 341 or 343 or 344 ..... 4-8 Hrs.
Elementary-school Administration: Ed. 326 and 356 ..... 4 Hrs.
Secondary-school Administration: Ed. 327, 346, 353 ..... 4 Hrs.
Electives ..... 4 Hours
Ed. 284; 335; 336; 344; 372

Other requirements for the Superintendent's Certificate are 5 years' experience in the public schools of West Virginia, 3 of which shall have been as principal of either high school or elementary school or as superintendent or assistant superintendent in county and/or district in West Virginia; and a health certificate.

Since most of the courses listed above have prerequisites, the consent of the instructor must be obtained before enrollment.

Ed. 203. Organization and Administration of Adult Education, OR Ed. 357, Organization and Administration of Vocational Education

Ed. 341. School Buildings and Equipment, OR Ed. 343, School Surveys, OR Ed. 344, Staff Personnel Administration

Ed. 360. Problem in Education or Thesis

Other electives for Master's degree (to be chosen with adviser's approval) ..... 2-8 Hours

Total for Master's degree .....30-36 Hours

The Curriculum for High-School Principals Leading to the Degree of Master of Arts[1]

Required for Master's degree ..... 14 Hours

1. High-school Administration
   - Ed. 339. Public-school Organization and Administration ..... 2 Hrs.
   - Ed. 353. The Secondary-school Principal ---------- 2 Hrs.
2. Supervision of High-school Instruction
   - Ed. 346. Principles of Supervision ---------- 2 Hrs.
   - Ed. 327. Demonstration and Practice in the Supervision of Secondary-school Instruction .... 2 Hrs.
3. Other Required Courses for Master's degree:
   - Ed. 336. The High-school Curriculum
   - Ed. 372. Statistical Methods

Electives for Master's degree (from other graduate courses in Education or from other fields by permission of adviser) .....16-22 Hours

Suggested electives in Education for Master's degree:

- Ed. 231. Philosophy of Education or
- Ed. 233. Educational Sociology
- Ed. 281. History of Elementary and Secondary Education in the United States
- Ed. 284. Pupil-personnel Administration
- Ed. 357. Organization of Programs in Vocational Education
- Ed. 360. Problem in Education or Thesis
- Ed. 399. Techniques of Educational Research

Total for Master's degree .....30-36 Hours

[1]Completion of this curriculum also fulfills the scholastic requirements for certification in West Virginia as a high-school principal. Other requirements for the high-school principal's certificate are (1) graduation from a standard college or university and qualifications for a first-class high-school teaching certificate; (2) three years of secondary-school teaching experience; and (3) a health certificate. Since most of the courses listed above have prerequisites, the consent of the instructor must be obtained before enrollment.

The Curriculum for Elementary-School Principals Leading to the Degree of Master of Arts[2]

Required for Master's degree ..... 14 Hours

1. Elementary-school Administration
   - Ed. 339. Public-school Organization and Administration ..... 2 Hrs.
   - Ed. 356. The Elementary-school Principal ..... 2 Hrs.

2. Supervision of Elementary-school Instruction
   Two courses elected from:
   - Ed. 306. Supervision of Geography ..... 2 Hrs.
   - Ed. 307. Supervision of Health and Safety Programs in Elementary School ..... 2 Hrs.
   - Ed. 326. Practice in the Supervision of Elementary-school Instruction ..... 2 Hrs.
   - Ed. 346. Principles of Supervision ..... 2 Hrs.

3. Other Phases of Elementary Education ..... 6 Hrs.
   Three additional courses elected from:
   - Ed. 291. Exploratory Reading ..... 2 Hrs.
   - Ed. 304. Remedial Techniques in Elementary-school Subjects ..... 2 Hrs.
   - Ed. 305. County Educational Clinic ..... 2 Hrs.
   - Ed. 306. Supervision of Geography ..... 2 Hrs.
   - Ed. 307. Supervision of Health and Safety Programs in Elementary Schools ..... 2 Hrs.
   - Ed. 308. Psychology of Arithmetic ..... 2 Hrs.
   - Ed. 309 Psychology of Reading ..... 2 Hrs.
   - Ed. 316. Psychology of Elementary-school Subjects 2 Hrs.
   - Ed. 335. The Elementary-school Curriculum ..... 2 Hrs.
   - Ed. 367. Teaching Social Studies in Elementary and Secondary Schools ..... 2 Hrs.

Electives (approximately one-half in academic fields) to be chosen with approval of adviser ..... 16 to 22 Hrs.
Total for Master's degree ..... 30-36 Hours

[2]Completion of this curriculum also fulfills the Education requirements for the elementary school principal's certificate. Other requirements are (1) possession of a first-class elementary collegiate certificate; (2) three years of elementary-school teaching experience; and (3) a health certificate.

The Curriculum for Secondary-School Classroom Teachers Leading to the Degree of Master of Arts

Required:

Graduate courses in Education ..... 10-20 Hours

Suggested courses ..... 12 Hours

- Ed. 203. Adult Education
- Ed. 222. Current Practices
- Ed. 231. Philosophy of Education
- Ed. 291. Exploratory Reading
- Ed. 336. The Curriculum
- Ed. 335. The Elementary-school Curriculum
- Ed. 360. A Problem in Education OR Thesis

Graduate courses in a recognized teaching field

Required ..... 10-20 Hours

Graduate courses in tributary or supplemental fields

Required ..... 0-10 Hours

Total ..... 30-36 Hours

All courses are to be selected by the candidate subject to the approval of his adviser so as to fulfill the above requirements.

The Curriculum for Elementary-School Classroom Teachers Leading to the Degree of Master of Arts

Required ---------- 12 Hours

1. Psychology of Elementary-school Subjects -------- 4 Hrs.
   Two courses elected from:
   Ed. 308. Psychology of Arithmetic
   Ed. 309. Psychology of Reading
   Ed. 316. Psychology of Elementary-school Subjects
2. Other Phases of Elementary Education ---------- 8 Hrs.
   Four additional courses elected from:
   Ed. 291. Exploratory Reading
   Ed. 304. Remedial Techniques in Elementary-school Subjects
   Ed. 305. County Educational Clinic
   Ed. 306. Supervision of Geography
   Ed. 307. Supervision of Health and Safety Programs in Elementary Schools
   Ed. 309. Psychology of Reading
   Ed. 316. Psychology of Elementary-school Subjects
   Ed. 335. The Elementary-school Curriculum
   Ed. 367. Teaching Social Studies in Elementary and Secondary Schools

Electives (approximately one-half in academic fields) to be chosen with approval of adviser ---------- 18 to 24 Hrs.
Total for Master's degree ---------- 30-36 Hours

The Curriculum Leading to the Degree of Master of Science in Home-Economics Education

Required:

Graduate courses in Education ..... 10-20 Hours
Graduate courses in home economics ..... 10-20 Hours
Graduate courses in tributary fields ..... 0-10 Hours

Total ..... 30-36 Hours

The Curriculum for Teacher-Counselor Leading to the Degree of Master of Arts[3]

Required for Master's degree ..... 12 Hours

Ed. 284. Pupil-personnel Administration
Ed. 373. Basic Course in Principles and Practices of Guidance
Ed. 374. Counseling Techniques
Ed. 375. Individual Inventory Techniques
Ed. 376. Occupational Information Techniques
Ed. 377. Special Counseling Problems

[3]Completion of this curriculum also fulfills scholastic requirements for certification in West Virginia for a Teacher-counselor Certificate. Other requirements are (1) a first-class teaching certificate at the level at which guidance is to be done; and (2) two years' successful teaching experience at the level at which guidance is to be done.

Approved electives ..... 12 Hours
- Econ. 240. Labor Relations
- Econ. 245. Personnel Administration
- Psych. 219. Clinical Psychology
- Psych. 224. Mental Measurement
- Psych. 228. Personnel Psychology
- Psych. 229. Abnormal Psychology
- Soc. Work 212. Field-work Observation
- Soc. Work 220. The Field of Social Work
- Soc. Work 251. Introduction to Social Work
- Soc. Work 260. Problems of Child Welfare
- Soc. 210. Marriage and the Family
- Soc. 233. Problems of Crime and Delinquency
- Ed. 258. Education for Special Groups
- Ed. 372. Statistical Methods in Education
- Ed. 360, 362. Problem or Thesis

Free electives ..... 6-12 Hours

Total for Master's degree ..... 30-36 Hours

The Curriculum for Counselor Leading to the Degree of Master of Arts[4]

Required courses for Master's degree ..... 16 Hours
- Same as required for Teacher-counselor with following additional:
- Ed. 212. Techniques of Evaluation

OR

- Ed. 372. Educational Statistics
- Ed. 258. Education for Special Groups

Approved electives ..... 12 Hours
- Same as for Teacher-counselor

Free electives ..... 2-8 Hours

Total for Master's degree ..... 30-36 Hours

The Curriculum for Industrial-arts Teachers and Supervisors Leading to the Degree of Master of Arts

Required ..... 10 Hours
- Ed. 294. Organization of Industrial Arts
- Ed. 339. Public-school Organization and Administration
- Ed. 357. Organization of Programs in Vocational Education
- Ed. 373. Basic Course in Principles and Practices of Guidance

OR

- Ed. 252. Vocational Guidance
- Ed. 364. Advanced Methods in Teaching Industrial Arts

Electives from this group ..... 10 Hours
- Rec. 204. Recreation Hobbies

[4]Completion of this curriculum also fulfills the scholastic requirements in West Virginia for a Counselor's Certificate. Other requirements are (1) a first-class teaching certificate at the level at which the guidance is to be done; (2) 2 years of successful teaching experience at the level at which the guidance is to be done; and (3) cumulative wage-earning experience to a total of no less than 1400 clock hours of regular paid employment, as certified by the employer or employers, in agriculture, commerce, and industry, or 16 weeks in a cooperative work-experience counselor-training program.

Ed. 203. Adult Education
Ed. 222. Current Practices in Secondary Schools
Ed. 252. Vocational Guidance
Ed. 258. Education of Special Groups
Ed. 284. Pupil-personnel Problems
Ed. 251. Cinematography
Ed. 322. Organizing Programs of Audio-visual Education
Ed. 341. School Buildings and Equipment
Ed. 360. Problem in Education

Practical or Skilled ---------- 10 Hours
Agr. Engr. 252. Advanced Farm Mechanics ------ 2 Hrs.
Agr. Engr. 253. Advanced Farm Machinery ------ 3 Hrs.
Agr. Engr. 280, 281. Special Topics ---------- 2-8 Hrs.
Chem. Engr. 230. Ceramics ---------- 2-3 Hrs.
Chem. Engr. 235. Practical Pottery ---------- 2 Hrs.
Chem. Engr. 236. Pottery and Ceramic Arts -------2 Hrs.
Mining Engr. 351. Coal Mining ---------- 3 Hrs.
Educ. 204. Advanced Woodworking ---------- 3 Hrs.
Educ. 205. Advanced Crafts Work ---- ---------- 3 Hrs.
Educ. 206. Industrial Experience ---------- 2-5 Hrs.

Free electives ---------- 0-6 Hours

Total----------30-36 Hours

The College of Engineering and Mechanic Arts

The School of Mines

ORGANIZATION

The College of Engineering and Mechanic Arts

For the purpose of administration and instruction, the College of Engineering and Mechanic Arts is organized into the following departments:

The department of aeronautical engineering (A. E.)
The department of chemical engineering (Ch. E.)
The department of civil engineering (C. E.)
The department of electrical engineering (E. E.)
The department of mechanical engineering (M. E.)
The department of mechanics (M.)

The School of Mines

All the mining and industrial extension work of the University is organized under the School of Mines. For the purpose of administration the school is divided into the following divisions:

The department of mining engineering (E. M.)
The department of mining and industrial extension.

THE COLLEGE OF ENGINEERING

The purpose of the College of Engineering and Mechanic Arts is to instruct students in the fundamental sciences and arts upon which all engineering rests and to impart such special and technical knowledge of the various branches of engineering as will enable its graduates to enter them and maintain themselves while gaining their professional experience. To accomplish this purpose the work of the college is classified under the following curricula: aeronautical engineering, chemical engineering, civil engineering, electrical engineering, and mechanical engineering. For those students desiring a broader training than is offered in the four-year curricula, a five-year course may be taken leading to two degrees.

The work of the first year is common in aeronautical, chemical, civil, electrical, and mechanical engineering. This is also true for mining engineering, which is taught in the School of Mines. Because of this common course, the student may postpone his choice of engineering branch until the end of the first year. By that time he becomes sufficiently acquainted with the various fields to make a wiser selection than would be possible on first entering college. In the second year differentiation starts, increasing year by year.

The course in aeronautical engineering is intended to give the student fundamental training in engineering together with special training and instruction in aeronautical and related subjects. By a judicious selection of electives in the senior year, the student may prepare himself for the field of aeronautical design and research or he may prepare himself for the operational field of aeronautics. Flight training is required in the summer following the second year. This together with special instruction already received makes it possible for the student to pass the C.A.A. examination for a private pilot's certificate.

The object of the chemical engineering curriculum is to qualify students to design, build, and manage manufacturing plants, in which the products of manufacture are based on chemical processes, and to fit them for professional employment as industrial chemists and chemical engineers. In addition to many courses which are required of all students, two options are offered in the upper-class work—one in metallurgy and the other in the field of ceramics.

The course in civil engineering is planned to give the student a substantial foundation in the fields of highway, railway, sanitary, municipal, structural, and hydraulic engineering. The field of civil engineering is one of the broadest of engineering professions, and yet the work of the civil engineer rests upon a relatively compact body of scientific principles. In the third and fourth years the student has a choice between a general civil engineering option and a sanitary engineering option. If he takes the civil engineering option he may choose between work in hydraulic engineering and in highway engineering.

The course in electrical engineering has for its purpose a general training in engineering fundamentals together with special training in either the field of electrical power development and utilization, or in the field of electrical communication and the application of electronic devices to industrial and other uses. Since it is impossible to cover both fields adequately in one course.

the student is offered a choice of two options. One is a power option and the other is a communication option. The content of the two options diverges in the third and fourth years, where the work is of a more technical and professional character. In the fourth year of either option the student has a choice of six hours of electives, and by a proper choice of these. the student may either broaden his training or he may specialize further in his chosen field.

Mechanical engineering deals essentially with the design and construction of machinery, the development and utilization of power, and the production in industry. To this end the student takes a considerable amount of shop work in addition to the theoretical courses in the fundamental sciences of mathematics, chemistry, and physics. In the upper-class work attention is given to machine design, power-plant design, refrigeration, heating and ventilation, as well as to production methods and industrial management. In the senior year, electives in aeronautical engineering more than meet the civil-service requirements in that field.

THE SCHOOL OF MINES

The School of Mines, established at the University in 1926, was given a degree-granting status in July, 1930. For administrative purposes the School of Mines is divided into two departments: (1) the department of mining engineering, and (2) the department of mining and industrial extension. The department offices, laboratories, classrooms, museum, and model rooms are located in the Mineral Industries Building.

Resident Instruction

The School of Mines offers (1) a four-year course leading to the degree of Bachelor of Science in Engineering of Mines. with options in coal mining and oil and gas engineering; and (2) a combined science and engineering course, extending over five years, leading to the degree of Bachelor of Science (at the end of the fourth year) and Bachelor of Science in Engineering of Mines (at the end of the fifth year). The work in mining engineering is based on fundamental instruction in the development, production, distribution, and utilization of coal, petroleum, and natural gas.

THE ENGINEERING EXPERIMENT STATION

W. A. KOEHLER, Acting Director

The chief functions of the Engineering Experiment Station are the encouragement and prosecution of research and investigations that will enhance the industrial and economical welfare of the people of West Virginia; original contributions to the fundamental principles and knowledge along scientific and engineering lines, and the stimulation and training of graduate students in research activities. The research undertaken by the Station therefore is primarily concerned with investigations in the production, processing, and utilization of the natural resources of West Virginia; investigations that will aid the existing industries of the state and promote the development of new industries; and investigations that will aid in the planning, design, and

development of the public works of the state. As a consequence of this program, the subjects receiving particular attention by the staff of the Station are coal, oil, gas, clays, stone, sand, timber, water, steam and electric power, sewerage, sanitation, road building, transportation, aeronautics, and communications.

The Station will assist in compiling surveys and in conducting investigations of the industrial requirements and possibilities of any region or community in the state. It cooperates with the West Virginia Agricultural Experiment Station, the State Road Commission, the State Geological Survey, the State Department of Health, the national engineering societies, and state or national agencies whose assistance may promote the more effective fulfillment of the Station's functions.

To aid industrial organizations in this state that lack facilities and personnel to undertake important research investigations which arise in the development of their operations, the Station stands ready, where time and facilities permit, to assist in the prosecution of investigations on their fundamental problems. Such advisory services are free, but any special equipment, materials, or labor that may be needed must be supplied by the organization for which the work is done. Several companies and technological associations have sponsored research fellowships in the Station.

The staff of the Station includes part-time services of several of the teaching members of the faculties of the College of Engineering and of the School of Mines, as well as a few full-time research engineers and chemists and part-time graduate student research assistants.

The results of the studies, surveys, investigations, and researches of the Experiment Station are published in bulletin form. Two series of bulletins are issued; to date there are 21 numbers in the Research Series and 23 in the Technical Series. The Technical Bulletins contain selected papers from the Proceedings of the Annual State Water Purification Conferences, the State Coal Conferences, and the Appalachian Gas Measurement Short Courses. A list of publications and copies of the bulletins may be obtained upon application to the Director of the Engineering Experiment Station.

A number of industrial research fellowships are now in operation in the Experiment Station in addition to those which are supported by funds of the Station, the School of Mines, and the College of Engineering.

MINING AND INDUSTRIAL EXTENSION

The department of mining and industrial extension in the School of Mines conducts courses of instruction in practical subjects in various sections of the state where groups of individuals wish to study and receive training in subjects pertaining to their every-day work. The department also aims to disseminate useful knowledge which has been amassed by research studies at the University to all classes of citizens in the state, and in this way to bring the University and its opportunities for learning to various groups of students who desire to enroll in its extension department.

The Short Course in Coal Mining:

The Short Course in Coal Mining offered by the department of mining and industrial extension gives an opportunity to operators, officials, and em-

ployees of mining companies to obtain instruction pertaining to their work. The subjects covered in the short course are: explosives, methods of mining, timbering, mine gases, mine ventilation, hoisting, haulage, mine drainage safety lamps, mine management, electricity in mines, mine fires and explosions, safety organization and administration, mining arithmetic, and elementary drawing.

Special attention is given to students desirous of preparing themselves for the teaching of mining classes under the Smith-Hughes and George-Dean Acts.

At the close of the short course the West Virginia Department of Mines conducts an examination for mine foremen and fire bosses. Tuition is free.

The thirty-sixth annual session of the Short Course in Coal Mining will begin on Monday, June 7, and continue until Wednesday, July 21, 1948. For further information, write for the special announcement of the Short Course in Coal Mining.

The Short Course in Gas Measurement:

The first Appalachian Gas Measurement Short Course was conducted in 1938 by the University in cooperation with the Public Service Commission of West Virginia, the West Virginia Oil and Natural Gas Association, the American Gas Association, and public utilities and industries producing, selling, or consuming natural gas in large quantities in West Virginia and surrounding states. This course provides instruction in the theory and practice of gas measurement and pressure regulation and is designed to be of interest to executives and officials of gas companies as well as to metermen. The course covers a period of three days and is usually held during the third week of August each year.

Vocational Courses Offered in Extension:

Courses in foreman training and other special courses for those in industry are offered in centers where there is sufficient interest. The services of the Department are available for any city or town desiring to establish night schools and part-time schools.

Extension courses in mining are offered under the direction of the University at various mining towns throughout the state. The instruction in these courses is carried on by University extension instructors who visit each center every week. At the present time the work is planned on a four-year basis to cover the following courses: mine gases, safety lamps, ventilation, timbering, explosives, haulage, prevention of mine accidents, mine waste, drainage and pumping, mining methods, foremanship, electricity, mine fires and explosions, and coal geology. In each of these unit courses, particular emphasis is placed on safety features, state mining laws, and application of arithmetic to mining problems.

An intensive course for the training of mine foremen in cooperation with the Federal Board of Vocational Education is also offered in certain sections of the State.

Fire Service Extension School:

An annual training school for firemen is conducted each year in cooperation with the State Fire Marshal, the National Board of Fire Underwriters,

and the West Virginia Inspection Bureau. This school is conducted under the supervision of R. E. Hanna, Jr., instructor in Fire Service Extension Schools. Extension courses in fire-department evolutions, fire protection, and fire prevention are offered under the direction of the University in cooperation with the State Fire Marshal at various fire departments in West Virginia. The instruction in these courses is carried on by local University extension instructors in the various departments. The classes meet once each week for approximately 30 weeks and cover the following subjects: motor equipment, pumps, hose, ropes, ladders, rescue, attack and extinguishment, salvage, ventilation, gases, inspection, overhauling, and minor equipment. Approximately one-fifth of the time is spent on actual fire-department evolutions.

Oil and Gas Extension Classes:

Extension classes for employees of the oil and gas industries are offered at various centers throughout the state by the Mining and Industrial Extension Department of the School of Mines. The classes are organized in September of each year and meet once each week for a period of approximately nine months. The instruction is divided into three years' work as follows: First Year — mathematics, physics, and applied mechanics; Second Year — fluid mechanics, oil and gas transmission, gas measurement, pressure regulation, and control; Third Year—combustion and utilization of gas, oil and gas geology, and principles of industrial management. Fourth Year—geology, economics, and prime movers.

The Coal Conference on Combustion:

Since 1937, the School of Mines has sponsored each year an annual Coal Conference at Morgantown. These conferences have been devoted to the study of the problems incident to the marketing and utilization of coal and to the promotion of research investigations that may assist in the retention and expansion of coal markets. The annual Coal Conference will again be held at Morgantown in 1948; dates will be announced later.

Water Purification Conferences:

An annual conference on water purification is held each year in cooperation with the State Department of Health. A number of out-of-state engineers are invited to present papers at the conference. The State Department of Health and College of Engineering cooperate in the program. These conferences are held under the supervision of H. W. Speiden.

Electric Meter Conferences:

Conferences for men interested in the metering of electrical energy will be arranged to suit the convenience of those interested. Each group should consist of from eight to twelve men who have at least a working knowledge of elementary algebra and trigonometry. Conferences may be arranged by writing to Professor A. A. Hall and are usually expected to be for 10-day periods devoted to current practices as well as to the basic theory of electrical meters, their connections and testing.

Mine Electrician's Conference:

Conferences for men engaged in the application of electrical energy to the mining industry will be arranged for at certain times, in connection with the department of electrical engineering, when such work does not conflict

with the regular University classes. Such groups should consist of not less than ten or more then fifteen men who should have at least a working knowledge of arithmetic and elementary electrical laws. Conferences may be arranged for by writing to Prof. C. T. Holland, Assistant Director of Mining Extension, and are expected to be from three- to five-day periods of class study and laboratory work in the department of electrical engineering.

The Standing Committees

ENGINEERING SCHEDULES: Professors E. C. JONES and SIMONS; Associate Professors BAKER and REYNOLDS; Assistant Professor WORRELL.

ENGINEERING SOCIETY: Professors FORMAN, BOOMSLITER, KOEHLER, and H. M. CATHER; Associate Professor BAKER.

LIBRARY: Professor SPEIDEN; Associate Professor SEIBERT; Instructor POLING.

SCHOLARSHIP: Professors HALL, KOEHLER, and C. H. CATHER.

REQUIREMENTS FOR DEGREES

Any student, in order to be eligible to receive a Bachelor's degree in any branch of Engineering for which degrees are offered, in addition to satisfying all entrance requirements shall be required to complete satisfactorily 144 semester hours of work as specified in the curriculum of the department leading to the degree for which the student is a candidate, plus the general requirements of physical education and military science required by the University for such a degree.

NOTE: At present the University requires of all male students, unless permanently exempted therefrom in each case, 2 semester hours of physical education and 8 semester hours of military science; and of all female students, unless permanently exempted therefrom, 4 semester hours of physical education. Students entering with 58 hours of credit are also exempted.

Substitutions

The following substitutions are regularly allowed in addition to special substitutions listed elsewhere:

Chemistry 5, 6, 106, 15 or 115 (2 to 5 hrs.) for Chemistry 10.
Chemistry 5, 10, or 105 for Chemistry 105s.
Chemistry 115 for Chemistry 15.
Chemistry 6 or 106 (5 hrs.) for Chemistry 15 and 107.
Economics 1 and 2 for Economics 103 or 30.
English 1s and 2s for either English 1 or 2.
C. E. 201 for C. E. 115 Lab.
M.E. 25 for C.E. 110.
M. E. 29 for M. E. 27.
Physics 1, 2, 3, 4, 109, and 110 for Physics 105, 106, 107, and 108.
Speech 11 for Speech 13.

Thesis

Any candidate for a baccalaureate degree in engineering may with the consent of his major professor prepare a thesis on some subject relating to a special branch of engineering or other department of applied science. It will be presented for approval first to the instructor under whose guidance it has been prepared, then to the head of the department in which the degree is to be conferred. A typewritten copy of the thesis prepared in accordance with official specifications and signed by both the instructor in charge and the head of the department, must be placed in the University library before graduation.

THE COLLEGE OF ENGINEERING CURRICULA

1. A four-year curriculum leading to the degree of Bachelor of Science in Aeronautical Engineering.

2. A four-year curriculum leading to the degree of Bachelor of Science in Chemical Engineering, with options in metallurgy and ceramics.

3. A four-year curriculum leading to the degree of Bachelor of Science in Civil Engineering, with option in sanitary engineering.

4. A four-year curriculum leading to the degree of Bachelor of Science in Electrical Engineering, with options in power and communications.

5. A four-year curriculum leading to the degree of Bachelor of Science in Mechanical Engineering, with electives in power and industrial engineering.

6. Combined science and engineering curricula extending over five or more years leading to the degree of Bachelor of Science, and Bachelor of Science in Engineering.

7. A two-year curriculum leading to the certificate as Electronic and Radio Technician.

The Freshman Schedule

In order to permit all students in the College of Engineering and the School of Mines to have a year in which to find out definitely what curriculum they wish to pursue, the first year of all engineering curricula is made uniform. To assist the student in making an intelligent choice, a series of weekly lectures is given throughout the first semester explaining the work of the several branches of engineering.

FIRST YEAR

(Identical for all engineering and mining courses)

First Semester	Hrs.	Second Semester	Hrs.
Eng. 1—Comp. and Rhet.	3	Eng. 2—Comp. and Rhet.	3
Math. 3—College Algebra	3	Math. 5—Analytical Geom.	4
Math. 4—Plane Trig.	3	Chem. 2—Inorganic Chem.	4
Chem. 1—Inorganic Chem.	4	Mil. 2—Military Science	2
Mil. 1—Military Science	2	P. E. 2—Ser. Prog. (Men)	1
P.E. 1—Ser. Prog. (Men)	1	C. E. 1—Surveying	2
M. E. 20—Mechanical Drawing	3	M. E. 26—Descriptive Geom.	3
G. 1—Engineering Lectures			
	19		19

Aeronautical Engineering

The curriculum in aeronautical engineering is designed to give the student a general training in engineering fundamentals and specialized training in either of two fields according to the student's choice. The options offered are aerodynamic and structural design (Option I) and aircraft power plants (Option II). While the primary objective of Option I is to provide training in the aerodynamic and structural design of the airplane and that of Option II is to provide training in aircraft power plants, it is possible for the student to enter other specialized fields by selecting appropriate electives and by acquiring the proper supplementary experience.

The two options are of the same course content through the third year except for a difference of one course in the second semester of the third year. Those students selecting Option I take basic airplane structures at this time, while those selecting Option II take internal cumbustion engines.

In the fourth year the courses are of a specialized nature governed by the particular option selected.

The fact that the University has its own planes and a hangar at the Morgantown Municipal Airport is an advantage in that it makes possible flight instruction as well as adequate instruction in the maintenance and repair of aircraft equipment and affords an opportunity for the detailed study of aircraft and its component parts. Flight training, though not required, is recommended for students planning to become aeronautical engineers.

Curriculum in Aeronautical Engineering

Leading to the Degree of Bachelor of Science in Aeronautical Engineering

FIRST YEAR· See Curriculum above.

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.
M. E. 7—Welding and Heat Treatment	1
M. E. 11—Machine Shop	2
A. E. 15—Aircraft Repair and Maintenance	2
	5

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Science and Tactics	2	Mil. 4—Science and Tactics	2
Econ. 30—Fund. of Economics	3	M. 101—Statics	3
Speech 11—Effective Speaking	3	M. E. 27—Mechanism	2
		A. E. 16—Elementary Aerodynamics	3
	17		19

THIRD YEAR

First Semester	Hrs.	Second Semester	Hrs.
M. 102—Mechanics of Matls.	4	E. E. 103—Elements of E. E.	4
M. 103—Matls. Testing Lab.	1	A. E. 222—Aircraft Propulsion	2
M. E. 221—Thermodynamics	3	M. E. 122—Mechanical Lab.	2
Math. 253—Adv. Math. for Engrs.	3	A. E. 202—Aerodynamics	3
M. 104—Kinetics	3	C. E. 115—Fluid Mechanics	3
E. E. 102—Elements of E. E.	4	A. E. 210—Basic Airplane Struct. OR (Option I)	3
G. 101—Eng'g. Society	½	M. E. 229—Int. Comb. Engines (Option II)	3
		G. 102—Eng'g. Society	½
	18½		17½

FOURTH YEAR

OPTION I—AERODYNAMIC AND STRUCTURAL DESIGN

A. E. 204—Airplane Performance	2	A. E. 203—Chordwise & Spanwise Air Load Dist.	3
M. E. 113—Machine Design	4	M. E. 229—Int. Comb. Engines	3
A. E. 205—Experimental Aero	2	A. E. 212—Airplane Design	3
A. E. 211—Structural Design of Metal Airplanes	4	A. E. 213—Airplane Struct. Lab.	1
Ch. E. 227—Aircraft Structural Materials	2	G. 110—Business Law	3
Electives	5	Electives	6
G. 103—Eng'g. Society	½	G. 104—Eng'g. Society	½
		Inspection Trip	
	19½		19½

*OPTION II—AIRCRAFT POWER PLANTS

Ch. E. 227—Aircraft Structural Materials	2	A. E. 223—Aircraft Engine Design	3
A. E. 205—Exp. Aero.	2	A. E. 225—Aircraft Engine Lab.	2
A. E. 210—Basic Airplane Struct.	3	G. 110—Business Law	3
A. E. 221—Aircraft Engines	3	Electives	11
M. E. 113—Machine Design	4	G. 104—Engineering Society	½
Electives	5	Inspection Trip	
G. 103—Engineering Society	½		19½
	19½		

* To be omitted until there is adequate student demand.

ELECTIVES IN AERONAUTICAL ENGINEERING

A. E. 101—Flight Training	1	A.E. 123—Adv. Flight Training	1
A. E. 102—Flight Training	1	Geog. 107—Global Geography	3
A. E. 124—Thesis	2 to 5	Geol. 12—Meteorology	3
A. E. 241—Air Navigation	2	Modern language	6
C. E. 120—Matls. of Const.	2	Advanced math., mechanics, or physics	3 to 8
C. E. 201—Hydr. Measurements	1	Mil. 105-108	1 to 6
Ch. E. 211—Fuels and Comb.	2 or 3	M. E. 203—Advanced Machine Design	4
E. E. 274—Indus. Applications of Electric Control	3	M. E. 205—Industrial Engineering	3
A.E. 120—Aviation Gr. School	2	Physiol. 215—Aviation Physiol.	1
A.E. 121—Adv. Flight Training	1		

Chemical Engineering

The standard four-year course in chemical engineering has been developed to qualify young men for positions in operation, design, construction, and management of manufacturing plants in which the raw materials are subjected to chemical changes and processes to produce the finished products. This curriculum (page 23) includes fundamental courses: in mathematics—through calculus; in chemistry—inorganic, analytical, organic, and physical; in physics; in basic engineering—surveying, mechanical drawing, mechanism, mechanics, strength of materials, and fluid flow; in heat and power engineering; in electrical engineering; in mineralogy and metallurgy; in chemical engineering—principles, calculations, thermodynamics, design, unit operations, unit organic processes, heat transfer, and economics; in electro-chemical industries, inorganic, and organic technology. This curriculum provides the student with a broad foundation in the fundamental principles of those subjects which wide experience has shown are essential for a successful career in the chemical engineering profession; or as engineers in any industry involving a succession of individual or unit operations.

To complete the requirements for the B. S. Ch. E. degree in four years, students should follow the curriculum as outlined, taking all required shop courses and qualitative analysis in the summer session; also, it is definitely advisable to take Physical Chemistry 260 and 261 in the Summer Session before the third year. Modifications in the standard chemical engineering curriculum for the ceramic and metallurgy options are outlined below.

Students preparing to take chemical engineering should present for entrance as many units as possible in mathematics, chemistry, and physics; also units in German, French, or Spanish. While certain basic courses in English, economics, and public speaking are required in the regular Ch. E. curriculum, a student will obtain a broader education in economics, history, language, science, applied technology, and engineering by taking the combined Bachelor of Science and Chemical Engineering course. By a careful selection of electives both degrees may be earned in five years.

Ceramics Option—Chemical engineering and ceramics have many basic concepts and engineering principles in common. Students selecting the ceramics option can obtain all required courses in chemical engineering and should take the following as their senior electives: Ch. E. 230 (3 hrs.), Ch. E. 232 (2 hrs.) and Ch. E. 233 (2 hrs.). Students showing marked ability in ceramics may select Ch. E. 124 (2 hrs.) in place of either of the latter two courses. Most students graduating with ceramic option complete more than the required number of hours, hence should preferably take also Ch. E. 211 (2 or 3 hrs.) and Ch. E. 231 (2 hrs.).

Metallurgy Option—The metallurgical industries apply many of the uint operations and fundamental principles studied in the chemical engineering curriculum. Students selecting the metallurgy option should take Ch. E. 222 (2 hrs.) and Ch. E. 223 (3 hrs.), and should preferably also take Ch. E. 211 (2 or 3 hrs.) and Ch. E. 213 (2 hrs.) and Ch. E. 232 (2 hrs.). Students having special aptitude in metallurgy may take Ch. E. 124 (2-5 hrs.). By taking these elective courses the student should be well prepared to begin his career in a metallurgical industry.

Curriculum in Chemical Engineering

Leading to the Degree of Bachelor of Science in Chemical Engineering

FIRST YEAR: See Curriculum on page 223

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.
M. E. 7—Welding and Heat Treat.*—1 hr. Chem. 8—Qual. Anal.	2
M. E. 11—Machine Work	2

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Chem. 15—Quant. Analysis	3	Chem. 107—Quant. Analysis	2
Speech 13—Effective Speaking	2	E. M. 106—Mineralogy	1
Econ. 30—Fund. of Economics	3	M. 101—Statics	3
		M. E. 27—Mechanism	2
	19		19

THIRD YEAR

Chem. 233—Organic Chem.	5	Ch. E. 201—Unit Organic processes	3
Chem. 260—Physical Chem.	3	Chem. 261—Physical Chem.	3
Ch. E. 205—Elements of Ch. E.	3	Ch. E. 207—Prin. Chem. Eng'g.	3
Ch. E. 206—Eng'g. Chem. Lab.	1	Ch. E. 208—Chem. Eng'g. Lab.	2
E. M. 202—Coal Lab.	1	M. E. 220—Heat and Pow. Eng'g.	3
M. 102—Mech. of Materials	4	M. 104—Kinetics	3
Ch. E. 109—Ch. E. Economics	2	C. E. 115—Fluid Mechanics	2
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	19½		19½

FOURTH YEAR

Ch. E. 204—Chem. Eng'g. Calc.	2	Ch. E. 203—Ch. E. Thermodynamics	2
Ch. E. 105—Chem. Eng'g. Design	2	Ch. E. 210—Electrochem. Ind.	3
Ch. E. 209—Chem. Eng'g. Lab.	2	Ch. E. 215—Organic Chem. Techn.	2
Ch. E. 214—Inorganic Chem. Techn.	2	Ch. E. 216—Chem. Eng'g. Design	2
Ch. E. 220—Metallurgy	2	G. 104—Engineering Society	½
Ch. E. 221—Metallurgy Lab.	1	Electives—(see below)	6
E. E. 110—Elements of E. E.	5	Inspection Trip	
G. 103—Engineering Society	½		
Electives—(see below)	1		
	17½		17½

*Recommended for students taking metallurgy option.

ELECTIVES IN CHEMICAL ENGINEERING

Ch. E. 124—Thesis	2 to 5	Ch. E. 223—Metallography	2 to 3
Ch. E. 202—Water Exam. and Purif.	2	Ch. E. 232—Refractories	2
Ch. E. 211—Fuels and Combust.	2 to 3	C. E. 122—Structural Engineering	2 to 3
Ch. E. 222—Non-Ferrous Metallurgy	2	M. E. 205—Industrial Eng'g.	3
M. 103—Materials Test. Lab.	1	Geol. 1—G. Geology	3
		German 1 and 2	6
		Mil. 105-108—Adv. Military	1 to 6

Civil Engineering

Civil Engineering includes the measurement of land surfaces and the production of maps, the design, construction, and operation of transportation facilities, the design and construction of fixed structures, sanitary and municipal engineering, and hydraulic engineering.

The measurement of land surfaces is done by some kind of surveying such as plane, topographic, or geodetic. The survey may be conducted entirely on the surface or it may combine the use of surface and aerial methods. Transportation facilities divide readily into highway, railway, water, and air groups, the work of the civil engineer being most directly concerned with the construction and maintenance of the fixed portions of the system in each case. Among the large number of fixed structures in the civil engineer's field are bridges, buildings, tunnels, subways, foundations, walls, and piers. Sanitary and municipal engineering cover the design, maintenance, and operation of water supplies, water purification plants, distribution systems, sewer systems, sewage-disposal plants, and garbage-disposal plants. Hydraulic engineering deals with the design and construction of water-power installations, dry docks, locks and dams, flood control, and irrigation projects.

The civil engineering curriculum has been planned to give broad education in those general and scientific subjects which form the foundation of all engineering, and a special training in the field of civil engineering. During the first two years emphasis is placed on subjects such as English, mathematics, chemistry, physics, mechanical drawing, and surveying. These subjects are taught, not as an end in themselves, but rather as tools for the solution of engineering problems. The teaching is done by means of recitations, laboratory work, drawing room work, and field practice. During these first two years instruction is also given in military training and physical education, which help to keep the student physically fit. In the third and fourth years the application of these basic courses is made to the solution of engineering problems. Breadth of training is furnished by courses in mechanics, economics, bacteriology, geology, electricity, and heat and power engineering. Depth of training is furnished by professional work in highway, railway, structural, sanitary, and hydraulic engineering.

The civil engineering professional field is too wide to be covered thoroughly in a four-year course. For this reason, during the latter part of the course, certain options are offered. In addition to the sanitary engineering option outlined below, the student in the fourth year is offered a choice between taking two elective professional courses or doing research and preparing a thesis.

Sanitary Engineering Option

Students in civil engineering who desire to specialize in sanitary engineering are required to make the following regular substitutions:

Fourth year: first semester: C. E. 202, Water Purification, 3 hrs., for C. E. 103. C. E. 117, Municipal Engineering, is required instead of the 2 hours of optional subjects. Second semester: C. E. 203, Sewage Disposal, 3 hrs., for C. E. 204. Ch. E. 202, Water Examination, is required instead of 2 hours of optional subjects.

Curriculum in Civil Engineering

Leading to the Degree of Bachelor of Science in Civil Engineering

FIRST YEAR: See Curriculum on page 223

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Chem. 10—Quant. Analysis	2	Mil. 4—Military Science	2
Mil. 3—Military Science	2	C. E. 3—Railroad Curves	2
Speech 13—Effective Spk.	2	M. 101—Statics	3
C. E. 2—Surveying	4	Geol. 1—G. Geology	3
	19		19

C. E. 4s—Summer Surveying (five weeks) 5

THIRD YEAR

Econ. 103—Econ. and Acct.	3	Bus. 110—Acct. for Engrs.	2
M. 102—Mech. of Materials	4	C. E. 101—El. of Hwy. Eng'g.	3
M. 103—Materials Test. Lab.	1	C. E. 115—Fluid Mechanics	3
C. E. 110—Struct. Drafting	2	C. E. 121—Structural Eng'g.	4
M. E. 220—Heat & Pow. Eng'g.	3	M. 104—Kinetics	3
E. E. 110—Elements of E. E.	5	Bact. 141—Bacteriology	3
G. 101—Engineering Society	½	Geol. 2—Geol. Lab.	1
		G. 102—Engineering Society	½
	18½		19½

FOURTH YEAR

C. E. 116—Water Supply Eng'g.	4	C. E. 102—Railway Eng'g.	3
C. E. 120—Materials of Constr.	2	C. E. 118—Sewerage	3
C. E. 123—Bridge Design	3	C. E. 206—Reinforced Concrete	3
C. E. 207—Foundations	3	G. 110—Business Law	3
G. 103—Engineering Society	½	G. 104—Engineering Society	½
C. E. 103—Highway Design	3	Inspection Trip	
Electives—(see below)	2	C. E. 204—Advanced Structs.	3
		Electives—(see below)	2
	17½		17½

ELECTIVES

C. E. 200—Water Power Eng'g.	2	C. E. 209—Highway Lab.	2
Ch. E. 202—Water Ex.	2	C. E. 124—Thesis	2 or 4
C. E. 208—Trans. Econ.	2	C. E. 210—Photogrammetry	2
		Mil. 105-108—Adv. Military	1 to 6

NOTE: Students offering 6 hours of Advanced Military for Engineers toward their degree are not required to take Speech 13.

Electrical Engineering

(POWER OPTION)

The course in electrical engineering has been developed for the purpose of giving to the student who completes the course a general training in engineering fundamentals and special training in either the electrical power field or the communication field. The curriculum in electrical engineering has two options. One is the power option, described below. The other is the communication option, described on a later page.

In the first two years of electrical engineering the work is confined mostly to those subjects which are essential as preparatory courses for the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, physics, mechanics, chemistry, economics, drafting, and the elements of shop practice.

The studies pursued during the third year are those of fundamental importance to the electrical engineer. The subject matter includes additional mechanics, Engineering Society, courses in thermodynamics, heat engines, mechanical laboratory, and the following electrical subjects: direct-current machines, direct-current machines laboratory, electrical calculation and design, alternating-current theory, principles of alternating-current machines, electronics, and illumination.

In the fourth year the subject matter consists of additional Engineering Society, courses in kinetics, fluid mechanics, business law and the following electrical subjects: a year's study of alternating-current machines and a course in each of the following: electrical control, electrical communication, electrical engineering laboratory, advanced electrical laboratory, electrical power transmission, and engineering economics. In this year the student has a choice of six hours of electives to be selected from a group of subjects most of which are professional in character. By a proper selection of these electives the student may either broaden his training or else he may continue further specialization in the power field.

It will be observed that for many of the courses scheduled in this curriculum, the work of the classroom is supplemented by concurrent work in the laboratory or drafting room. By means of experimental work in the laboratory, followed with well-written reports and the problems in the design of electrical apparatus, the student acquires a clearer conception of the facts and principles discussed in the classroom and also a working knowledge of the subject matter. All of this is essential if he is to become a successful electrical engineer.

In the course in electrical industry as a public utility, general economic considerations are applied to the problems of electric power generation, the transmission and use of electric power, and the selection of electrical and allied equipment for the economic utilization of electric power. Also the study and analysis of rate structures is taken up. This course and the course in business law are valuable inclusions in the power option for the student who is interested in taking up administrative work.

Curriculum in Electrical Engineering

(POWER OPTION)

Leading to the Degree of Bachelor of Science in Electrical Engineering

FIRST YEAR: See Curriculum on page 223

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.		Hrs.
M. E. 11—Machine Shop	2	E. E. 3—Intro. Elect. Eng'g.	2
M. E. 7—Welding & Heat Treatment	1		

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Econ. 30—Fund. of Econ.	3	E. E. 100—Elem. of Elect. Eng'g.	4
Speech 11—Effective Spk.	3	M. 101—Statics	3
M. E. 27—Mechanism	2		
	19		18

THIRD YEAR

E. E. 104—Illumination	2	E. E. 237—Prin. of A. C. Mach.	4
E. E. 230—D. C. Machinery	3	E. E. 244—Elec. Calc. & Design	3
E. E. 231—D. C. Mach. Lab.	2	E. E. 250—Electronics	4
E. E. 235—A. C. Theory	4	M. 102—Strength of Materials	4
Mathematics 253	3	M. E. 222—Heat Engines	3
M. E. 122—Mechanical Lab.	2	G. 102—Eng'g. Society	½
M. E. 221—Thermodynamics	3		
G. 101—Eng'g. Society	½		
	19½		18½

FOURTH YEAR

E. E. 239—A. C. Machinery	3	E. E. 242—Adv. Elect. Lab.	2
E. E. 241—Elect. Eng. Lab.	2	E. E. 247—Elect. Power Transmission	3
E. E. 245—Electric Control	2	E. E. 270—Elect. Ind. as a Pub. Utility	3
E. E. 260—Elect. Communication	3	G. 110—Business Law	3
C. E. 115—Fluid Mechanics	2	Electives	3
M. 104—Kinetics	3	G. 104—Eng'g. Society	½
Electives	3	Inspection trip	
G. 103—Eng'g. Society	½		
E. E. 240—A. C. Machinery	3		
	18½		17½

ELECTIVES

E. E. 124—Thesis	2 to 5	Advanced Math.	3
E. E. 253-354—Radio Eng'g.	6	Ch. E. 210—Electr. Chem. Ind.	2 or 3
E. E. 280-281—Elect. Probl.	1 to 6	M. E. 223—Steam Pow. Plants	3
E. E. 282—Symmetrical Comp.	3	M. E. 228—Eng'g. Lab.	2
E. E. 283—Telephone Eng'g.	3	Mil. 105-108—Adv. Military	1 to 6
E. E. 286—Industrial Control	3		

Electrical Engineering

(COMMUNICATION OPTION)

The course in electrical engineering has been developed for the purpose of giving to the student who completes the course a general training in engineering fundamentals and special training in either the electrical power field or the field of electrical communication. The curriculum in electrical engineering has two options. One is a power option (described on a preceding page) and the other is a communication option (described on this page). In the first two years of electrical engineering the work is confined mostly to those subjects which are essential as preparatory courses for the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, physics, mechanics, chemistry, economics, drafting, and the elements of shop practice.

The studies pursued during the third year are those of fundamental importance to the electrical engineer. The subject matter includes additional mechanics, Engineering Society, a course in heat and power engineering, and the following electrical courses: direct-current machines, direct-current machines laboratory, alternating-current theory, principles of alternating-current machines, and electronics, with the following subject matter of special importance in communication work: Two courses of advanced mathematics intended to provide proficiency in mathematical analysis as an aid in the study of advanced courses in communication. A laboratory course in electrical measurements to develop the technique of precise measurements in communication work.

In the fourth year the subject matter consists of additional Engineering Society, courses in fluid mechanics, business law, illumination, engineering economics, and communication subjects consisting of two semesters of electrical communication, and two semesters of radio engineering with the accompanying laboratory. In this year the student has a choice of six hours of electives to be selected from a group of subjects most of which are professional in character. By a proper choice of these electives the student may either broaden his training, or else he may continue further specialization in the communication field.

It will be observed that for many of the courses scheduled in this curriculum, the work of the classroom is supplemented by concurrent work in the laboratory or drafting room. By means of experimental work in the laboratory followed with well-written reports and the problems in the design of electrical apparatus, the student acquires a clearer conception of the facts and principles discussed in the classroom and also a working knowledge of the subject matter. All of this is essential if the student is to become a successful electrical engineer.

In the course in electrical industry as a public utility, general economic considerations are applied to electric power, its generation, transmission, and use together with the selection of electrical and allied equipment from an economic standpoint; also a study and analysis is made of rate structures. This course and the course in business law are valuable inclusions in the electrical engineering curriculum for the student who is interested in taking up administrative work.

Curriculum in Electrical Engineering

(Communication Option)

Leading to the Degree of Bachelor of Science in Electrical Engineering

FIRST YEAR: See Curriculum on page 223

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.		Hrs.
M. E. 11—Machine Shop	2	E. E. 3—Intro. Elect. Eng'g.	2
M. E. 7—Welding and Heat Treat.	1		

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Phys. 105—G. Physics	4	Phys. 106—G. Physics	4
Phys. 107—G. Physics Lab.	1	Phys. 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Econ. 30—Fund. of Economics	3	E. E. 100—Elem. of Elect. Eng'g.	4
Speech 11—Effective Spk.	3	M. 101—Statics	3
M. E. 27—Mechanism	2		
	19		18

THIRD YEAR

E. E. 230—D. C. Machinery	3	E. E. 237—Prin. of A. C. Mach.	4
E. E. 231—D. C. Mach. Lab.	2	E. E. 244—Elect. Calc. & Design	3
E. E. 235—A. C. Theory	4	E. E. 250—Electronics	4
Mathematics 253	3	E. E. 251—Elect. Measurements Lab.	1
M. 102—Strength of Materials	4	Mathematics 254	3
M. E. 220—Heat & Power Eng'g.	3	M. 104—Kinetics	3
G. 101—Eng'g. Society	½	G. 102—Eng'g. Society	½
	19½		18½

FOURTH YEAR

E. E. 104—Illumination	2	E. E. 254—Radio Eng'g.	3
E. E. 245—Electric Control	2	E. E. 256—Radio Lab.	2
E. E. 253—Radio Eng'g.	3	E. E. 261—Elect. Communication	3
E. E. 255—Radio Lab.	3	E. E. 270—Elect. Ind. as Pub. Utility	3
E. E. 260—Elect. Communication	3	G. 110—Business Law	3
C. E. 115—Fluid Mechanics	2	Electives	3
Electives	3	G. 104—Eng'g. Society	½
G. 103—Eng'g. Society	½	Inspection trip	
	18½		17½

ELECTIVES

E. E. 124—Thesis	2 to 5	E. E. 283—Telephone Eng'g.	3
E. E. 247—Elect. Power Transmission	3	E. E. 286—Industrial Control	3
E. E. 280, 281—Elect. Prob.	1 to 6	Adv. Math. or Physics	3 to 6
E. E. 282—Symmetrical Comp.	3	Mil. 105-108—Adv. Mil.	1 to 6

Mechanical Engineering

The purpose of the course in mechanical engineering is to give the student such mental equipment as will enable him to deal most effectively both technically and commercially with general engineering problems. All possible practice is given in the work that an engineer is ordinarily called on to do, but greater stress is laid on a thorough knowledge of those underlying fundamental principles and methods which are the foundation of all engineering professions. To this is added a study of those economic subjects which are essential to a thorough understanding of sound business methods.

The first and second years are devoted to those basic preparatory courses which are essential to the more technical courses which follow in the third and fourth years. This preparatory instruction supplies the requisite foundation in English, mathematics, chemistry, physics, statics, mechanism, drafting, and shop practice.

Fundamental drafting-room procedure is taught in the first year and this is supplemented by shop work, beginning in the summer following the first year. This is planned to give a knowledge of the fundamental tools and of methods of production, which, when combined with the study of mechanism, machine design, and power-plant design in the second, third, and fourth years, will enable the student to work out designs that are both practical in operation and economical to manufacture.

The work in pure mathematics is terminated at the end of the second year, and applications follow in the recitation room courses in mechanism, statics, mechanics of materials, dynamics, and machine design. Power engineering begins with the course in thermodynamics in the third year and is continued by the courses in heat engines, internal combustion engines, and power plant design A sufficient amount of electrical engineering is given in the third and fourth years to enable the student to handle engineering operations involving the simple electrical problems, and additional courses are available as electives.

The engineering laboratories provide the student with practice in testing, handling, and caring for a large variety of machinery, including steam, air, gas, hydraulic, material-testing, internal combustion, and power-transmission machinery. One-half day a week is devoted to this work during the last two years.

Electives are provided in the fourth year which enable the student to specialize in the power field or in the industrial field in accordance with his natural inclination. Students interested in the power field pursue courses in steam turbines, heating, ventilating, and air conditioning. Students interested in the industrial field pursue courses in problems of organization and management of industries, motion and time study, and related subjects.

The curriculum is broad, highly technical, and designed to meet the needs of young men interested in the scientific aspects of industry. The young graduate ordinarily enters a graduate apprenticeship in a public utility, manufacturing, or operating organization where opportunity is provided for his development in research, design, operation, sales, or administration, depending upon his interests and aptitudes and upon the opportunities available.

Curriculum in Mechanical Engineering

Leading to the Degree of Bachelor of Science in Mechanical Engineering

FIRST YEAR: See Curriculum on page 223

SUMMER SESSION FOLLOWING FIRST YEAR

	Hrs.
M. E. 15—Welding, Forming, and Heat Treatment	2
M. E. 11—Machine Work	2
M. E. 12—Machine Work	1
	5

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics. 105—G. Physics	4	Physics. 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
Chem. 10—Quant. Analysis	2	M. 101—Statics	3
M. E. 29—Mechanism	4	M. E. 25—Elem. of Mach. Desn.	2
M. E. 16—Prod. Control	2	Speech 13—Eff. Spk.	2
	19		18

THIRD YEAR

Econ. 103—Econ. and Acct.	3	Bus. 110—Acct. for Engs.	2
M. 102—Mech. of Materials	4	M. 104—Kinetics	3
M. 103—Materials Test Lab.	1	E. E. 103—Elements of E. E.	4
E. E. 102—Elements of E. E.	4	M. E. 113—Machine Design	4
M. E. 122—Mechanical Lab.	2	M. E. 105—Machine Constr.	2
M. E. 221—Thermodynamics	3	M. E. 222—Heat Engines	3
G. 101—Engineering Society	½	G. 102—Engineering Soceity	½
	17½		18½

FOURTH YEAR

C. E. 115—Fluid Mechanics	3	G. 110—Business Law	3
C. E. 122—Structural Eng'g. or		E. E. 274—Ind. App. of Elec. Cont.	3
Ch. E. 220—Metallurgy	2	M. E. 227—Pow. Plant Design	2
Ch. E. 221—Metallurgy Lab.	1	M. E. 228—Eng'g. Lab.	2
M. E. 123—Eng'g. Lab.	2	M. E. 229—Int. Comb. Engines	3
M. E. 203—Machine Design	4	G. 104—Engineering Society	½
M. E. 223—Steam Pow. Plants	3	Inspection Trip	
G. 103—Engineering Society	½	Electives—(see below)	6
Electives—(see below)	3		19½
	18½		

ELECTIVES

M. E. 106—Shop Methods	2 or 3	M. E. 270—Industrial Lub.	3
M. E. 124—Thesis	2 to 4	Mil. 105-108—Adv. Military for Engineers	1 to 6
M. E. 205—Industrial Eng'g.	3	E. E. 244—Elect. Cal. & Desn.	3
M. E. 224—Steam Turbines	3	Ch. E. 211—Fuels and Combustion	2 to 3
M. E. 250—Heat. Vent. & Air Cond.	3		

FIVE-YEAR CURRICULA

For a description of curricula leading to the degree of Bachelor of Science and degrees in engineering, see page 240.

THE SCHOOL OF MINES CURRICULA[1]

1. A four-year curriculum leading to the degree of Bachelor of Science in Engineering of Mines, with options in coal mining and in petroleum and natural gas engineering.

2. Combined science and engineering curricula extending over five or more years leading to the degrees of Bachelor of Science and Bachelor of Science in Mining Engineering in the School of Mines.

Mining Engineer

Mining engineering deals with the processes and appliances used in the extraction of minerals from within the earth and their utilization. Not only must the mining engineer be thoroughly trained in mining and geology, but also in the application of the fundamental principles of civil, electrical, and mechanical engineering to mining conditions.

The first two years of the course in mining engineering are devoted to a thorough training in the underlying principles of mathematics, geology, physics, and chemistry. Supplementing these are courses in surveying, including mine surveying, English, and drawing. For the last two years of the course two options are provided, one in coal mining and one in geology, oil, and gas engineering. The student is permitted to state his choice of option at the beginning of the third year. Summer employment is usually arranged for students desiring such work, and such summer work is encouraged.

Coal Mining

In the Coal Mining Option the study of coal mining is taken up in the third year. This study includes the geology and classification of coals; explosives and blasting; prospecting; shaft sinking and tunneling; methods of working; haulage, hoisting, and pumping; and the preparation of coal for the market. A course in the projection of mine workings and the design of mining plants is offered throughout the fourth year. A course in the utilization of mining machinery, with particular reference to electrical equipment, is required in the senior year. A thorough course in mine gases and the ventilation of mines is given in the first half of the fourth year, supplemented by work in the mining laboratory. The course in fuels is designed to give the student a knowledge of the various fuels that are utilized in engineering practice, while the courses in metallurgy acquaint him with the minerals and processes used in manufacture of iron and steel. The course in mine management presents the economic, social, governmental, labor, and financial consideration to be met in the successful management of a mining enterprise.

The study of steam engineering begins with the course in heat and power engineering. Thorough groundwork in engineering principles is acquired in the five mechanical courses.

[1]The freshman year of these curricula is common with the freshman year in the College of Engineering. This provision permits a student to postpone a choice of curricula until after a year of college work.

Practice in the handling and care of instruments and machinery and in the solution of practical engineering problems is offered in the mechanical laboratory. These courses are followed by courses in electrical engineering and structural engineering.

Training in the science of geology is offered by the course in mineralogy and general geology. These courses may be supplemented by the study of the economic geology of the non-metallic minerals in the fourth year, special attention being paid to the geology of coal, oil, and gas. Should the student desire further work in geology a course in fluid geology is offered as an elective subject.

The courses in economics and business law furnish the fundamental business training so essential for the engineer.

Local coal fields and mining operations are utilized extensively for instruction and field work.

Curriculum in Mining Engineering

(COAL-MINING OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines

FIRST YEAR: See Curriculum on page 223

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
E. M. 100—Mine Surveying	2	Chem. 15—Quant. Analysis	3
E. M. 106—Mineralogy	2	E. M. 101—Mines Surveying	2
Geol. 1—General Geology	3	M. 101—Statics	3
Geol. 2—General Geology Lab.	1		
	19		19

E. M. 102s—Summer Mine Surveying (five weeks) 5

THIRD YEAR

E. E. 102—Elements of E. E.	4	E. E. 103—Elements of E. E.	4
C. E. 110—Structural Drafting	2	E. M. 202—Coal Lab.	1
M. 102—Mech. of Materials	4	Speech 13—Effective Spkg.	2
M. 103—Materials Test. Lab.	1	E. M. 212—Coal Mining	4
E. M. 111—Mining	2	C. E. 115—Fluid Mechanics	3
E. M. 107—Mining Methods	4	M. E. 220—Heat & Pow. Eng'g.	3
Ch. E. 220—Metallurgy	2		
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	19½		17½

FOURTH YEAR

Econ. 103—Econ. and Acct.	3	G. 110—Business Law	3
C. E. 122—Structural Eng'g.	3	Bus. 110—Prin. of Acct.	2
E. M. 115—Mine Design	2	E. M. 114—Mine Management	2
E. M. 213—Mine Ventilation	3	E. M. 116—Mine Design	3
M. 104—Kinetics	3	E. M. 118—Coal Preparation	3
G. 103—Engineering Society	½	E. M. 119—Mine Equip. & Mach.	2
Electives—(see below)	3	G. 104—Engineering Society	½
Inspection Trip		Electives—(see below)	3
	17½		18½

ELECTIVES IN THE COAL-MINING OPTION

E. M. 117—Indus. Safety Eng'g. .. 3
E. M. 120—Thesis .....2 to 4
E. M. 203—Geol. Survey 3
Ch. E. 211—Fuels 3
Ch. E. 222—Non. Fer. Met. 2
E. E. 274—Industrial Applications of Electricity 3
C. E. 206—Concrete Const. 3
M. E. 207—Industrial Eng'g. 3
Geol. 111—Economic Geol. ...3 or 4
Geol. 3—Historical Geol. 3
Geol. 4—Hist. Geol. Lab. 1
Geol. 108—Nat. Resources and Geology of West Va. ....2 or 3
Mil. 105-108—Adv. Military ...1 to 6

Geological, Petroleum, and Natural Gas Engineering

This option is planned to meet the needs of the engineer who is more interested in the geological aspect of mining than in the actual operation of a mining property and particularly for the student interested in the fields of natural gas and petroleum engineering. There is a growing demand for the so-called mining geologist who, while he has had a thorough training in the fundamentals of engineering in general and of mining engineering in particular, yet is specially qualified to work out the detailed geological features of mining properties and to make reports on them. This is particularly true in the case of oil and gas companies, where accurate knowledge in advance of actual drilling operations is of the greatest importance in the economical development of the field. Besides the opportunities offered by mining companies, many of our railroads maintain a corps of geologists while the several states and the federal government are continually carrying on geological investigations. This course also offers an excellent preparation for those who propose to do graduate work.

Particular emphasis is placed on the development, production, distribution, and utilization of natural gas and petroleum. This is an engineering field essential to modern industry offering many opportunities for the technically trained student. Local production fields, compressor stations, and refineries coupled with new equipment facilities offer many unique advantages in this field of engineering.

In the third year the course differs from the coal-mining option in that organic chemistry, petroleum, natural gas, and geological courses are substituted for the courses in coal mining. A course in field geology in which the student prepares a geological map and a complete report on an assigned area enables him to apply the geological knowledge received in various courses. The fundamentals of mining and metallurgy are studied in the third year as well. The study of oil and gas geology treats of the origin, properties, distribution, and mode of accumulation of oil and gas, and familiarizes the student with all the available sources of information on this subject. The courses in oil and gas production and oil refining deal with the subjects of the chemical and physical properties of petroleum and natural gas, their extraction and subsequent treatment, the valuation of oil and gas properties, reports on them, and the actual testing in the laboratory of various oils, oil shales, and natural gas. The problems of natural gas measurement and distribution are particularly stressed.

A thorough grounding in the fundamentals of business is afforded by the courses in economics, accounting, and business law.

Curriculum in Mining Engineering

(PETROLEUM AND NATURAL GAS OPTION)

Leading to the Degree of Bachelor of Science in Engineering of Mines

FIRST YEAR: See Curriculum on page 223

SECOND YEAR

First Semester	Hrs.	Second Semester	Hrs.
Physics 105—G. Physics	4	Physics 106—G. Physics	4
Physics 107—G. Physics Lab.	1	Physics 108—G. Physics Lab.	1
Math. 107—Calculus	4	Math. 108—Calculus	4
Mil. 3—Military Science	2	Mil. 4—Military Science	2
E. M. 100—Mine Surveying	2	Chem. 15—Quant. Analysis	3
E. M. 106—Mineralogy	2	E. M. 101—Mine Surveying	2
Geol. 1—General Geol.	3	M. 101—Statics	3
Geol. 2—Gen. Geol. Lab.	1		
	19		19

E. M. 102s—Summer Mine Surveying (five weeks) 5

THIRD YEAR

Chem. 233—Organic Chem.	5	M. E. 220—Heat & Pow. Eng'g.	3
Geol. 3—Historical Geol.	3	M. 104—Kinetics	3
Geol. 4—Hist. Geol. Lab.	1	Speech 13—Effective Speaking	2
M. 102—Mech. of Materials	4	Geol. 161—Field Geol.	3
M. 103—Materials Test. Lab.	1	Ch. E. 101—Oil Lab.	1
Ch. E. 220—Metallurgy	2	C. E. 115—Fluid Mechanics	3
E. M. 201—Oil Field Development	2	G. 110—Business Law	3
G. 101—Engineering Society	½	G. 102—Engineering Society	½
	18½		18½

FOURTH YEAR

Econ. 103—Econ. and Accounting	3	Bus. 110—Prin. of Accounting	2
Ch. E. 211—Fuels	3	Geol. 211—Econ. Geol. of Coal, Oil, and Gas	3
Ch. E. 212—Oil Refining	2	E. M. 203—Geol. Surveying	2
Geol. 205—Structural Geol.	3	E. M. 204—Oil & Gas Prod.	4
E. E. 110—Elements of E. E.	5	E. M. 205—Gas Meas. Eng'g.	2
G. 103—Engineering Society	½	G. 104—Engineering Society	½
Electives—(see below)	2	Inspection Trip	
		Electives—(see below)	4
	18½		17½

ELECTIVES IN THE PETROLEUM AND NATURAL GAS OPTION

E. M. 117—Indus. Safety Eng'g.	3	C. E. 206—Concrete Constr.	3
E. M. 212—Coal Mining	4	M. E. 207—Industrial Eng'g.	3
E. M. 120—Thesis	2 to 4	Geol. 111—Economic Geology (Non-metallic)	3
Geol. 108—Natural Resources & Geology of West Virginia	2 or 3	Chem. 238, 260	3 to 5
Mil. 105-108—Adv. Military	1 to 6	M. E. 229—Int. Comb. Engines	2

FIVE-YEAR CURRICULA

Leading to the Degree of Bachelor of Science in conjunction with Degrees in Engineering and in Mining Engineering

These curricula are designed to meet the needs of students who wish a broader training in liberal-arts subjects than is provided in a four-year curriculum.

(A) Requirements for the degree of Bachelor of Science

Subject	Hours
The requirements in the first three years of any four-year engineering curriculum[1]	116[2] to 119[2]
Additional economics (group requirements of 6 hours)	1 to 3
One foreign language	12
Elective from one of the following groups: (1) English, journalism, speech; (2) foreign language; (3) history; (4) political science; (5) philosophy and sociology; (6) business administration.	6
Total	136[2] to 140[2]

(B) Requirements for the Bachelor of Science degree in Engineering or Engineering of Mines to be conferred upon completion of the fifth year:

The work outlined for the fourth year in the department in which the first degree was taken	37 to 33
Total for five years	173[2] to 175[2]

THE TWO-YEAR CURRICULUM

Leading to the Certificate as Electronic and Radio Technician

Students who may wish to acquire technical training in the field of radio, electronics, and communication, but who do not care to meet all the requirements for the degree of Bachelor of Science in Electrical Engineering, may register for the two-year curriculum for the certificate as Electronics and Radio Technician.

This curriculum has been developed to give the student fundamental training in the application of electricity and allied subjects to prepare him for installation, operation, maintenance, and repair of radio and electronic equipment.

The requirements for entrance are the same as for the regular four-year courses. A total of 75 hours' credit plus the regular University requirements in military and physical education are required for completion of this course.

FIRST YEAR

First Semester	Hrs.	Second Semester	Hrs.
Eng. 1—Comp. & Rhet.	3	Eng. 2—Comp. & Rhet.	3
Math. 3—College Algebra	3	Phys. 2—General Physics	3
Math. 4—Plane Trigonometry	3	Phys. 4—General Phys. Lab.	1
Phys. 1—General Physics	3	Phys. 114—Intro. Radio-Tele. and Radio-Telephony	3
Phys. 3—General Phys. Lab.	1	M. E. 7—Heat Treat. & Welding	1
Phys. 113—Introductory Radio	3	E. E. 50—Prin. Elect. Tubes & Cir.	3
		M. E. 11—Machine Shop	2
	16		16

SUMMER SESSION FOLLOWING FIRST YEAR

Econ. 30—Fundamentals of Econ.	3
E. E. 51—Radio Receivers	4
E. E. 52—Princ. and Practice of Communications	4
	11

SECOND YEAR

M. E. 20—Mechanical Draw.	3	Chem. 2—Inorganic Chem.	4
Bus. 5—Accounting	3	Bus. 127—Salesmanship	2
Chem. 1—Inorganic Chem.	4	E. E. 110—Elem. of E. E.	5
E. E. 53—Prop. & Antenna Sys.	3	E. E. 55—Operation & Maint. of Radio Trans.	5
E. E. 54—Radio Servicing	3		
	16		16

GRADUATE CURRICULA

Graduate work leading to the degree of Master of Science in Engineering is offered in all departments. In certain departments courses leading to the degree of Doctor of Philosophy are also offered. The student who plans to pursue graduate work is directed to the courses as outlined in the Graduate School section of the University catalogue.

SPECIAL ENGINEERING CURRICULA

1. Elective Groups for Students in Other Colleges. Candidates for degrees other than engineering degrees and special students in any department of the University are permitted to elect subjects in the College of Engineering and the School of Mines, provided, in each case, they have had the subjects specified as prerequisites. Students who wish to take a general classical or scientific course of study before taking the engineering curriculum are advised to carry their mathematics as far as called for by the engineering curriculum, and to take some of their elective work in the College of Engineering.

Credits are given in the College of Arts and Sciences for the following engineering courses: Ch. E. 101, 202, 205, 206, 210, 220, and 221; C. E. 1, 2, 3, 110, and 115; E. E. 3, 100, 102, 103, 104, 110, 235, 250, 251, 253, 254, 255, 256; E. M. 106, 201, 202, 203, and 204; M. 101, 102, 103, 104; M. E. 20, 25, 26, 29, 221, and 222.

In addition the student may elect with the consent of his adviser, when his major subject is physics or if he is enrolled in the College of Education: M. E. 10 to 16 and 105 to 107; Ch. E. 110s.

2. Partial Curriculum. Students who have not the time or are otherwise unable to take full curriculum will be allowed to take a special or partial curriculum, consisting of such studies as they are prepared to take, provided such curriculum shall have been approved by the adviser. For further information see statement of requirements for admission as special students.

[1]Students maintaining an honor-point average of 1.5 or over may be granted separately the Bachelor of Science degree; otherwise the conferring of this degree will be deferred until the student has satisfied the requirements of the engineering degree.

[2]These figures include the present University requirements for 8 hours in military science and 2 hours in physical education.

COURSES IN THE COLLEGE OF ENGINEERING

NOTE: Courses marked by an asterisk (*) may be taken as undergraduate work in colleges other than the College of Engineering.

Aeronautical Engineering and Aviation

Associate Professor WOOLARD and Flight Instructors HENRY and BARR

A.E. 15. **Aircraft Repair and Maintenance.** I, II. S. 2 Hrs. PR: Enrollment in Aeronautical Engineering. Splicing of wind spars, ribs, stringers, care and replacement of airplane fabrics and finishes. Repair and maintenance of engines, carburetors, magnetos, propellers, and aircraft accessories. Mr. Henry

A.E. 16. **Elementary Aerodynamics.** II. 3 Hrs. PR: Math. 108 (or registration in Math. 108) and Physics 105 and 107. Fundamentals of aerodynamics as applied to the airplane and propeller. Staff

*A.E. 101. **Flight Training** I, II, S. 1 Hr. PR: A.E. 120 or registration in A E. 120. Beginning flight instruction and training consisting of 20 hours of flight time. The student will have approximately 12 hours of dual and 8 hours of solo flying in this course. Special flight fee $100, payable at registration. Mr. Henry

*A. E. 102. **Flight Training.** I, II, S. 1 Hr. PR: A E. 101. Continuation of A.E. 101, consisting of 20 hours' flight time. This course, together with A.E. 101, will enable a student to obtain the required flight time and necessary experience to prepare him for a C.A.A. private pilot's examination. Special flight fee of $100, payable at registration. Mr. Henry

*A.E. 120. **Aviation Ground School.** I, II, S. 2 Hrs. Nomenclature of aircraft, civil air regulations, navigation, meteorology, and aircraft engines. Staff

*A.E. 121. **Advanced Flight Training.** I, II, S. 1 Hr's. credit for 20 hours of flight time. PR: A.E. 102. Advanced flight training in light airplanes. Special flight fee for 20 Hrs'. flight.....$100
($100 payable at registration.)

*A.E. 122. **Advanced Aviation Ground School.** I, II. 5 Hrs. Preparation for written examination for commercial pilot's certificate. Mr. Woolard

*A.E. 123. **Advanced Flight Training.** I, II, S. 1 Hr. Credit for each 20 hours of flight time. PR: A.E. 102. Similar to A.E. 121 except that the flight training is given in a heavier type of airplane.
Special flight fee for 20 hrs'. flight $180
($90 payable at registration and the balance payable after completion of 10 hours' flight time.) Mr. Henry

A.E. 124. **Thesis.** 2 to 5 hours. Staff

A.E. 202. **Aerodynamics.** II. 3 Hrs. PR: Math. 253, A.E. 16 and registration in C.E. 115. Continuation of A.E. 16, but more advanced. Mr. Woolard

A.E. 203. **Chordwise and Spanwise Air-load Distribution.** II. 3 Hrs. PR. A.E. 202. Calculation of air loads on wings and tail surfaces. Mr. Woolard

A.E. 204. **Airplane Performance.** I. 2 Hrs. PR: A.E. 222, A.E. 202. Detailed study of airplane performance. Mr.----------

A.E. 205. Experimental Aerodynamics. I. 2 Hrs. PR: A.E. 202. Study of experimental methods and equipment. Laboratory calibration of equipment and wind-tunnel tests. Lecture and laboratory. Mr. Woolard

A.E. 206. Stability and Control. I, II. Hrs. PR: A.E. 202. Detailed study of factors Mr. Woolard

A.E. 210. Basic Airplane Structures. I, II. 3 Hrs. PR: M. 102 and M. 103. Analysis of the truss-type airplane structure and components. Brief introduction to stressed skin structures. Mr._____

A.E. 211. Structural Design of Metal Airplanes. I, II. 4 Hrs. PR: A.E. 210 or C.E. 122. Structural analysis of metal airplanes of the monocoque and semi-monocoque type. Mr._____

A.E. 212. Airplane Design. II. 3 Mrs. PR: A.E. 202 and A.E. 211. Preliminary aerodynamic and structural design of an airplane. Study of the C.A.A. Airplane Airworthiness Requirements. Staff

A.E. 213. Airplane Structures Laboratory. II. 1 Hr. PR: A.E. 211. Mr._____

A.E. 221. Aircraft Power Plants. I. 3 Hrs. PR: M.E. 221. Construction and operating characteristics of aircraft engines, jet and rocket propulsion, and aircraft fuels. Mr. _____

A.E. 222. Aircraft Propulsion. II. 2 Hrs. PR: A.E. 16 and M. 102. Fixed-pitch and constant-speed propellers; jet and rocket propulsion. Mr Woolard

A.E. 223. Aircraft Power-plant Design. II. 3 Hrs. PR: A.E. 221. Layout of a complete engine; detailed design of component parts. Mr. _____

A.E. 225. Aircraft-engine Laboratory. II. 2 Hrs. PR: A.E. 221 Mr._____

A.E. 241. Air Navigation. I, II. 2 Hrs. PR: A.E. 120. Dead reconing; celestial and radio navigation. Mr. _____

Chemical, Metallurgical, and Ceramic Engineering

Professors KOEHLER and SIMONS; Assistant Professors FAIRBANKS and JONES; Instructors BARTKUS, BAKER, and GALLI

UNDERGRADUATE DIVISION

*101. **Oil Laboratory.** II. 1 Hr. Primarily for students taking the Petroleum and Natural Gas Option. PR: Chemistry 6 or 107.* Mr. Koehler

102. **Blow-pipe Analysis and Assaying.** II. 2 Hrs. Laboratory and recitations. PR: Chemistry 6 or 107. Mr. Bartkus

105. **Chemical Engineering Design.** I. 2 Hrs. PR: M.E. 20; PR or concurrent, M. 102 and Ch. E. 205. Mr. Simons

109. **Chemical Engineering Economics.** I. 2 Hrs. The economic principles applied to layout, location, design, and operation of plants devoted to the production of industrial chemicals. PR: Econ. 30 and Chemistry 15. Mr. Koehler

*110s. **Practical Pottery.** S1, S2. 2 Hrs. Fundamentals of clay working. Mr. Koehler and Mr. Jones

124. **Thesis.** I, II. 2 to 5 Hrs. Some problem in chemical engineering or industrial chemistry is selected for investigation. A carefully prepared report is required. Open only to qualified seniors. Staff

200. **Chemical Engineering Operations.** I. 2 Hrs. Mr. Bartkus

201. **Unit Organic Processes.** II. 3 Hrs. Unit processes involved in the manufacture of commercial products from organic raw materials, petroleum, benzene and related compounds; intermediates, dyes, drugs, and explosives. PR: Chemistry 233 and Ch. E. 205. Mr. Simons

*202. **Water Examination and Purification.** II. 2 Hrs. PR: Chemistry 10 or 107. Staff

203. **Chemical Engineering Thermodynamics.** II. 2 Hrs. PR: Ch. E. 204 and 208. Mr. Koehler and Mr. Baker

204. **Chemical Engineering Calculations.** I. 2 Hrs. Industrial stoichiometry; calculations involved in the unit operations and processes of the chemical engineering industries. PR: Chemistry 261 and M.E. 220. Mr. Koehler and Mr. Baker

*205. **Elements of Chemical Engineering.** I. 3 Hrs. PR or concurrent: Chem. 260. Mr. Simons and Mr. Baker

*206. **Engineering Chemistry Laboratory.** I. 1 Hr. Technological tests and analyses of boiler waters, cements, and paints. PR: Chem. 107. Mr. Bartkus

207. **Principles of Chemical Engineering.** II. 3 Hrs. Continuation of Ch.E. 205; also PR or concurrent: Ch.E. 204. Mr. Simons

208, 209. **Chemical Engineering Laboratory.** I, II. 2 Hrs. Unit operations of the chemical engineering industries. PR: Ch.E. 205; PR or concurrent: C.E. 115. Staff

*210. **Electrochemical Industries.** I, II. 2 or 3 Hrs. PR: Chemistry 4, and PR or concurrent: E. E. 110 or Chemistry 260. Mr. Koehler

211. **Fuels and Combustion.** I. 2 or 3 Hrs. PR: Chemistry 6, 10, or 107 and M. E. 122 or M. E. 220. Mr. Koehler

212. **Oil-refining Laboratory.** I. 2 Hrs. PR: Chemistry 233 and Ch. E. 101. Mr. Galli

213. **Principles of Gas and Fuel Engineering.** II. 2 or 3 Hrs. PR: Ch. E. 211. Mr. Koehler

214. **Inorganic Chemical Technology.** I. 2 Hrs. PR: Ch. E. 205 and M. E. 220. Mr. Koehler

215. **Organic Chemical Technology.** II. 2 Hrs. PR: Ch. E. 201 and Ch. E. 205. Mr. Simons

216. **Chemical Engineering Design.** II. 2 Hrs. PR: Ch. E. 105 and Ch. E. 208. Mr. Simons

*220. **Metallurgy of Iron and Steel.** I. 2 Hrs. PR: Chem. 6, 10 or 107. Mr. Bartkus

*221. **Metallurgy Laboratory.** I. 1 Hr. Preparation and microscopical examination of specimens of iron and steel; analytical determinations; photomicrographs; to accompany Ch. E. 220. Mr. Bartkus

222. **Metallurgy, Non-ferrous.** II. 2 Hrs. PR: Chemistry 6, 10 or 15. Mr. Bartkus

223. **Metallography.** II. 2 or 3 Hrs. Phase-rule diagrams of alloy systems. Photomicrographs of metals and alloys. PR: Ch. E. 220, 221, 222, and Chemistry 260. Mr. Bartkus

227. **Aircraft Structural Materials.** I. 2 Hrs. PR: A. E. 211. Heavy and light alloys, plastics, fabrics, woods, and other major materials used in the production of aircraft. Mr. Bartkus

230. **Ceramics.** II. 2 or 3 Hrs. A review of the ceramic industries. Chemical and engineering principles applied in the manufacture of ceramic materials. PR: Chemistry 6 or 107. Mr. Koehler and Mr. Jones

231. **Advanced Ceramics Laboratory.** I. 2 Hrs. Preparation of bodies, glazes, enamels, and glass. Biscuit and glost firing. Coloring agents. Factory control tests. PR: Ch. E. 230. Mr. Koehler and Mr. Jones

232. **Refractories.** I, II. 2 Hrs. Manufacture, properties, and use of refractory materials. Standard tests. Study of phase diagrams of refractory materials. PR: Chem. 6 or 107, Chem. 260, and Ch.E. 230. Mr. Koehler

233. **Glass.** I, II. 2 Hrs. Physical and chemical properties of glass. Methods of analysis of glass and of raw materials. Theory and practice of manufacture. PR or concurrent: Chemistry 260. Mr. Koehler

235s. **Practical Pottery.** S1. 2 Hrs. A continuation of 110s. Mr. Koehler and Mr. Jones

*236s. **Pottery and Ceramic Art.** S2. 2 Hrs. Mr. Koehler and Mr. Jones

GRADUATE DIVISION

300. **Seminar.** S1. I, II. 1 to 6 Hrs. Hours to be arranged. Staff

304, 305, 306, 307. **Advanced Unit Operations.** I, II, S. 2 to 5 Hrs. per semester. Mr. Koehler and Mr. Simons

323, 324. **Advanced Unit Processes.** I, II, S. 2 to 5 Hrs. per semester. Mr. Simons

344. **Advanced Chemical Engineering Thermodynamics.** I, II, S. 3 Hrs. Mr. Koehler

345. **Advanced Chemical Engineering Thermodynamics.** I, II, S. 3 Hrs. Continuation of Ch.E. 344 including chemical kinetics. Mr. Koehler

353. **Transformation in Silicates.** I, II. 2 Hrs. PR: Ch.E. 230. Mr. Koehler

354. **Advanced Fuel Engineering.** I. 3 Hrs. Ch.E. 213. Mr. Koehler

372. **Advanced Chemical Engineering Design.** I, II, S. 2 to 5 Hrs. Mr. Simons

384. **Industrial Instrumentation and Control.** I, II, S. 3 Hrs. Mr. Koehler

397, 398. **Research.** I, II. Credit to be arranged. A suitable problem in chemical engineering, metallurgy, or ceramics is selected for investigation. PR: Ch. E. 207 and 208. Mr. Koehler and Staff

Civil Engineering

Professors SPEIDEN, DAVIS, and DOWNS; Associate Professor BAKER; Instructors BURCHINAL, DANIELS, and SEIDEN

UNDERGRADUATE DIVISION

*1. **Surveying.** I, II. 2 Hrs. Elementary surveying and spherical trigonometry. Primarily for freshmen. PR: Math. 4. Mr. Burchinal

*2. **Surveying.** I. 4 Hrs. PR: C. E. 1 and Math. 4. Mr. Baker

*3. **Railroad Curves.** II. 2 Hrs. Continuation of C. E. 2. Mr. Baker

4s. **Summer Surveying.** S1 (5 weeks). 5 Hrs. PR: C. E. 3. Mr. Baker

*5. **Land Surveying.** I. 4 Hrs. Primarily for forestry students. PR: Math. 10. Mr. Baker and Mr. Burchinal

*6. **Topographic Mapping.** II. 2 Hrs. Primarily for forestry students. PR: C.E. 5. Mr. Baker and Mr. Burchinal

101. Elements of Highway Engineering. I, II. 3 Hrs. PR: C. E. 4s. Mr. Downs
102. Railway Engineering. II. 3 Hrs. PR: C. E. 4s. Mr. Downs
103. Highway Design. I. 3 Hrs. PR: C. E. 101. Mr. Downs
*110. Structural Drafting. I. 2 Hrs. PR: M. E. 20 and registration in M. 101. Mr. Seiden
*115. Fluid Mechanics. I, II 2 or 3 Hrs. PR: M. 104 (or registration in M. 104). Mr. Daniels
116. Water Supply Engineering. I. 4 Hrs. PR: C. E. 115. Mr. Speiden
117. Municipal Engineering. I. 2 Hrs. PR: C. E. 115. Mr. Speiden
118. Sewerage. II. 3 Hrs. PR: C. E. 115. Mr. Speiden
120. Materials of Construction. I. 2 Hrs. PR: M. 102. Mr. Downs
121. Structural Engineering. II. 3 or 4 Hrs. PR: M. 102. Mr. Davis
122. Structural Engineering. I. 2 or 3 Hrs. PR: M. 102. Mr. Davis
123. Bridge Design. I. 3 Hrs. PR: C. E. 121. Mr. Davis
124. Thesis. I, II. 2 or 4 Hrs. Special design, investigation, or original research of some assigned topic relating to civil engineering . Staff
180. Civil Problems. I, II. S. 1 to 4 Hrs. Staff
200. Water-Power Engineering. II. 2 Hrs. PR: C. E. 115. Mr. Speiden
201. Hydraulic Measurements. I, II. 1 Hr. PR: C.E. 115. Mr. Daniels
202. Water Purification. I. 3 or 4 Hrs PR: registration in C. E. 116. Mr. Speiden
203. Sewage Disposal. II. 3 Hrs. PR: C. E. 115. Mr. Speiden
204. Advanced Structures. II. 3 Hrs. PR: C. E. 121. Mr. Davis
206. Reinforced Concrete. II. 3 Hrs. PR: C. E. 121. Mr. Davis
207. Foundations. I. 3 Hrs. PR: C. E. 121. Mr. Davis
208. Transportation Economics. I or II. 2 Hrs. PR: Registration in C. E. 102. Mr. Downs
209. Highway Laboratory. I. 2 Hrs. PR: M. 103. Mr. Downs
210. Photogrammetry. I. 2 Hrs. PR: C. E. 4s. Mr. Baker
211. Photographic Mapping. I. 2 Hrs. PR: C.E. 1 and A.E. 120. Cameras; photographic missions; distortion, interpretation, and mapping methods. Primarily for seniors in Aeronautical Engineering. Mr. Baker
280. Civil Engineering Problems. I, II. S. 1 to 4 Hrs. Staff

Graduate Division

351. Advanced Water-Supply Engineering. I, II. Credit to be arranged. PR: C. E. 116. Mr. Speiden
352. Sewerage and Sewage Disposal. I, II. Credit to be arranged. PR: C. E. 118. Mr. Speiden
353. Advanced Design Problems. I, II. Credit to be arranged. Mr. Davis and Mr. Speiden
354. Statically Indeterminate Structures. I, II. Credit to be arranged. PR: C. E. 204. Mr. Davis
355. Soils Mechanics. I, II. Credit to be arranged. Staff
397, 398. Research. I, II. Credit to be arranged. Mr. Davis and Mr. Speiden

Electrical Engineering

Professors FORMAN, HALL, and E. C. JONES; Associate Professor SEIBERT; Assistant Professor REED; Instructors DUBBE and MONSER

UNDERGRADUATE DIVISION

*3. Introductory Electrical Engineering. I, II, S. 2 Hrs. Mr. Seibert

*50. Principles of Electron Tubes and Circuits. II. 3 Hrs. PR: Phys. 113. Theory and applications of electron tubes and associated circuits. Mr. Seibert

*51. Radio Receivers. S. 4 Hrs. PR: E. E. 50. Theory and analysis of amplitude and frequency modulated receivers. Television receivers. With laboratory work. Mr. Seibert

*52. Principles and Practice of Communications. S. 4 Hrs. PR: E. E. 50. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*53. Propagation and Antenna Systems. I. 3 Hrs. PR: E. E. 52. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*54. Radio Servicing. I. 3 Hrs. PR: E. E. 51. Lecture, recitation, and laboratory for radio and electronic technicians. Mr. Seibert

*55. Operation and Maintenance of Radio Transmitters. II. 5 Hrs. PR: E. E. 53. Lecture, recitation, and laboratory. Credit for this course contingent on student passing Federal Communication Commission's radio telephone operator license examination. Mr. Seibert

*100. Elements of Electrical Engineering. II. 4 Hrs. Primarily for sophomores in electrical engineering. PR: Math. 108 (or registration in Math. 108); Physics 106 (or registration in Physics 106). Staff

*102, *103. Elements of Electrical Engineering. I and II respectively. 4 Hrs. each semester. For students in mechanical and mining engineering. PR: Phys. 106. Mr. Hall

*104. Illumination. I, II. 2 Hrs. PR: Physics 106. Mr. Forman

*110. Elements of Electrical Engineering. I, II. 5 Hrs. PR: Physics 106. For students in chemical, civil, and petroleum and natural gas option in mining engineering. Mr. Hall

124. Thesis. I, II. 2 to 5 Hrs. Special investigation or original research on some topic relating to electrical engineering. Mr. Forman and Mr. Hall

180, 181. Electrical Problems. I and II respectively. Credit to be arranged. For sophomores and juniors. Staff

230. Direct-Current Machinery. I. 3 Hrs. PR: E. E. 100. Mr. Jones and Mr. Dubbe

231. Direct-current Machinery Laboratory. I. 2 Hrs. To accompany E.E. 230. Mr. Jones and Mr. Dubbe

*235. Alternating-current Theory and Measurement. I. 4 Hrs. PR: E.E. 100. Mr. Reed and Mr. Monser

237. Principles of Alternating-current Machinery. II. 4 Hrs. PR: E.E. 102 or E.E. 235. Mr. Jones and Mr. Reed

239, 240. Alternating-Current Machinery. I and II respectively. 3 Hrs. each semester. PR: E. E. 237 accompanied by E. E. 241. Mr. Forman

241. **Electrical Engineering Laboratory.** I. 2 Hrs. To accompany E. E. 239. Mr. Reed

242. **Advanced Electrical Laboratory.** II. 2 Hrs. PR: E. E. 241. Advanced and special laboratory problems. Mr. Reed

244. **Electrical Calculations and Design.** II. 3 Hrs. PR: E. E. 102 or 230 and 237 (or registration in E. E. 237). Mr. Jones

245. **Electric Control.** I. 2 Hrs. PR: E. E. 237. Mr. Jones

247. **Electrical Power Transmission.** II. 3 Hrs. PR: E.E. 237 or 10. Mr. Dubbe

*250. **Electronics.** II. 4 Hrs. E.E. 235. Theory of electronics devices, their characteristics, and application. Mr. Seibert

*251. **Electrical Measurements Laboratory.** II. 1 Hr. To accompany E.E. 250 for communication majors. Mr. Seibert

*253. **Radio Engineering.** I. 3 Hrs. PR: E.E. 250. Mr. Seibert

*254. **Radio Engineering.** II. 3 Hrs. PR: E.E. 253. Mr. Seibert

*255. **Radio Laboratory.** I. 3 Hrs. To accompany E.E. 253. Mr. Seibert

260. **Electrical Communications.** I. 3 Hrs. PR: Math. 240 or 253. Mr. Forman

261. **Electrical Communications.** II. 3 Hrs. PR: E. E. 260. Mr. Forman

270. **The Electrical Industry as a Public Utility.** II. 3 Hrs. For seniors and graduates only. Economic principles involved in the selection and design of electrical equipment and in the utilization of electrical energy. Mr. Hall

274. **Industrial Applications of Electric Control.** I, II. 3 Hrs. For seniors or graduate students. Mr. Jones

280, 281. **Electrical Problems.** I and II respectively. Credit to be arranged. For junior, senior, and graduate students. Staff

282. **Symmetrical Components.** II. 3 Hrs. PR: E. E. 239. Mr. Forman

283. **Telephone Engineering.** I. 3 Hrs. PR: E. E. 235. Mr. Forman

284. **Transients.** II. 3 Hrs. PR: E. E. 235. Mr. Forman

285. **Electric Power Transmission and Distribution.** I, II. 3 Hrs. Advanced theory and calculation of transmission lines and networks. PR: E. E. 247. Mr. Hall

286. **Industrial Control.** II. 3 Hrs. PR: E. E. 245. Electrical control devices in industry, their application and use in the protection and control of electrical and mechanical equipment. Mr. Jones

GRADUATE DIVISION

397, 398. **Research.** I, II. Credit to be arranged. Advanced research or special investigations on some topic related to electrical engineering. Mr. Forman or Mr. Hall

General

Professors FORMAN and BOOMSLITER

UNDERGRADUATE DIVISION

1. **Engineering Lectures.** I. (No credit). Required of all freshmen in engineering. A series of lectures designed to acquaint the engineering

student at the beginning of his course with the profession he has chosen. Mr. Boomsliter

101. **Engineering Society.** I, II. ½ Hr. Primarily for juniors. Required of all candidates for degrees in engineering. Membership, attendance, and active participation in Engineering Society. Mr. Forman and Committee

102. **Engineering Society.** I, II. ½ Hr. Continuation of G. 101. For juniors. Mr. Forman and Committee

103. **Engineering Society.** I, II. ½ Hr. For seniors. Continuation of G. 101 and 102. Mr. Forman and Committee

104. **Engineering Society.** I, II. ½ Hr. Continuation of G. 103. For seniors. Mr. Forman and Committee

110. **Business Law.** I, II. 3 Hrs. General principles of business law. The law of contracts. Standard contract forms. PR: Economics 103, 30, or 1 and 2, and M. 102. Mr. Boomsliter

Mechanical Engineering

DRAWING, MACHINE CONSTRUCTION, POWER ENGINEERING, MACHINE DESIGN, AND INDUSTRIAL ENGINEERING

Professor H. M CATHER: Associate Professors GROW and REYNOLDS; Instructors HEROD, L. E. JONES, MARTIN, PEER, SCOTT, POLING, CROTTA, DE PROSPERO, OLSEN, and RUNNER

UNDERGRADUATE DIVISION

*7. **Welding and Heat Treatment.** I, II. S. 1 Hr. Mr. Jones and Mr. Martin

*10. **Pipefitting.** I, II. 1 Hr. Mr. Martin and Mr. Runner

*11. **Machine Work.** I, II, S. 2 Hrs. Mr. Jones, Mr. Martin, and Mr. Herod

*12. **Machine Work.** I, II, S. 1 Hr. Continuation of M.E. 11, which is prerequisite. Mr. Jones, Mr. Martin, and Mr. Herod

*15. **Welding, Forming, and Heat Treatment.** I, II, S. 2 Hrs. Molding and casting of ferrous and non-ferrous metals, oxy-acetylene welding, electric welding, resistance welding of plates, pipe, tubing, etc. Lectures, recitations, demonstrations, and shop practice. Mr. Martin and Mr. Jones

16. **Production Control.** I. 2 Hrs. PR: M. E. 11. The economic use of machine tools, planning assembly line manufacture, gauging, and inspection during the various processes of manufacture. Mr. Jones

*20. **Mechanical Drawing.** I, II. 3 Hrs. Staff

21s. **Mechanical Drawing.** SI. 2 Hrs. The use and care of drawing instruments, freehand sketching, and lettering. This course is intended for those who are teaching manual training in public schools. Mr. Cather

25. **Elements of Machine Design.** I, II. 2 Hrs. PR: M. E. 11 and M. E. 20. Empirical design, standard commercial parts; i.e., bearings, shafting, couplings, pulleys, keys, screw fittings, limits, tolerances and allowances, nomenclature. Staff

*26. **Descriptive Geometry.** I, II. 3 Hrs. PR: M. E. 20 and solid geometry. Staff

27. **Mechanism.** I, II. 2 Hrs. Lectures, recitations, and graphical solutions. PR: M. E. 20 and 26. Staff

*29. **Mechanism.** I, II. 4 Hrs. Lectures, recitations, and graphical solutions. PR: M. E. 20 and 26. Staff

*105. **Machine Construction.** I, II. 2 Hrs. PR: M. E. 12. Two three-hour periods. Mr. Jones and Mr. Martin

*106. **Shop Methods.** II. 2 or 3 Hrs. Continuation of M. E. 105. Two three-hour periods. Mr. Jones

*107. **Machine Construction.** Semester and credit to be arranged. Advanced work for special students. Continuation of M. E. 105 and 106. Mr. Jones

113. **Machine Design.** I, II. 4 Hrs. PR: M. 102 and M. E. 29. Two lectures and recitations and two 3-hr. computation periods. Mr. Poling

122. **Mechanical Laboratory.** I, II. 2 Hrs. PR: M.E. 221 or registration in M.E. 221. Mr. Reynolds, Mr. Peer, and Mr. Olsen

123. **Engineering Laboratory.** I. 2 Hrs. PR: M. E. 122. Mr. Reynolds

124. **Thesis.** I, II. 2 to 4 Hrs. Investigation or original research on some special topic relating to mechanical engineering. Staff

180, 181. **Mechanical Problems.** I, II. 1 to 3 Hrs. For sophomores and juniors.

203. **Advanced Machine Design.** I. 4 Hrs. Continuation of M. E. 113. Two lectures and recitations and two three-hour computation periods. Mr. Poling

205. **Industrial Engineering.** I. 3 Hrs. Mr. Reynolds

220. **Heat and Power Engineering.** I, II. 3 Hrs. PR: Phys. 105 and 107 and Math. 108 (or reg. in Math. 108). Staff

*221. **Thermodynamics of Engineering.** I, II. 3 Hrs. PR: Physics 105 and 107, and Math. 108 (or reg. in Math. 108). Staff

*222. **Heat Engines.** II. 3 Hrs. Continuation of M. E. 221. Mr. Cather and Mr. Reynolds

*223. **Steam Power Plants.** I. 3 Hrs. PR: M. E. 221. Mr. Cather

224. **Steam Turbines.** I, II. 3 Hrs. PR: M.E. 222. Mr. Cather and Mr. Reynolds

225. **Gas Engines and Gas Engineering.** II. 3 Hrs. Fuel gases, gas production and transmission, gas engines, etc. PR: M. E. 222. Mr. Cather

227. **Steam Power Plant Design.** II. 2 Hrs. Continuation of M. E. 223. Mr. Cather

228. **Engineering Laboratory.** II. 2 Hrs. PR: M.E. 123. Mr. Reynolds

229. **Internal Combustion Engines.** II. 3 Hrs. PR: M.E. 222. Mr. Cather and Mr. Reynolds

250. **Heating, Ventilating, and Air Conditioning.** I, II. 3 Hrs. PR: M. E. 220 or 222. Methods and systems of heating, ventilating, and air conditioning of various types of buildings, types of controls, and their applications. Mr. Cather and Mr. Reynolds

260. **Motion and Time Study.** II. 3 Hrs. Process and operation analysis essential to increasing efficiency of manufacturing and decreasing worker fatigue. Mr. Poling

270. **Industrial Lubrication.** I, II. 3 Hrs. PR: M. 102 and M. 104. Characteristics of crudes, refining methods, testing specifications, selecting, applications, and purification of oils and greases for industrial use.

280. 281. **Mechanical Problems.** I, II. 1 to 3 Hrs. For juniors, seniors, and graduates. Staff

GRADUATE DIVISION

397, 398. Research. I. II. Credit to be arranged. Investigation or original research on some special topic relating to mechanical engineering.
Mr. Cather and Staff

Mechanics

Professors BOOMSLITER and C. H. CATHER; Assistant Professor WORRELL; Instructor LESTER

UNDERGRADUATE DIVISION

*101. Statics. I, II. 3 Hrs. PR: Math. 108 (or registration in Math. 108), and Physics 105 and 107. Staff

*102. Mechanics of Materials. I, II. 4 Hrs. PR: Math. 108 and M. 101. Staff

*103. Materials Testing Laboratory. I, II. 1 Hr. PR: M. 102 or registration in M. 102. Staff

*104. Kinetics. I, II. 3 Hrs. Continuation of M. 101. PR: Math. 108 and M. 101. Staff

200. Advanced Mechanics of Materials. I or II. 2 to 4 Hrs. PR: M. 102. Mr. Boomsliter

201. Advanced Kinetics. I or II. 3 Hrs. PR: M. 101 and 104. Mr. Boomsliter

COURSES IN THE SCHOOL OF MINES

Professor HOLLAND; Instructors SANDY and HOWARD

UNDERGRADUATE DIVISION

100. Mine Surveying. I. 2 Hrs. PR: C. E. 1. Mr. Sandy and Mr. Laird

101. Mine Surveying. II. 2 Hrs. PR: E. M. 100. Mr. Sandy and Mr. Laird

102s. Mine Surveying. SI. 5 Hrs. This course is a continuation of and gives field practice supplementing E. M. 101. It must be taken during the summer term immediately following the semester in which E. M. 101 is taken. Mr. Sandy and Mr. Laird

*106. Elementary Mineralogy. I, II. 1 or 2 Hrs. PR: Chemistry 2. Mr. Martens

107. Mining Methods. I. 4 Hrs. Inspection trips, with written reports, are required. PR: Physics 106 and Geology 1. Mr. Husk

111. Mining. I. 2 Hrs. Explosives, timbering, drilling, and shaft sinking. PR: Chem. 6 and Physics 106. Mr. Husk

114. Mine Management. II. 2 Hrs. PR: E. M. 212. Mr. Holland

115. Mine Design. I. 2 Hrs. PR: E. M. 212 and registration in C. E. 122. Mr. Holland

116. Mine Design. II. 3 Hrs. Continuation of E. M. 115, which is prerequisite. Mr. Holland

117. Industrial Safety Engineering. I. 3 Hrs. PR: Senior standing. Mr. Husk

118. Coal Preparation. II. 3 Hrs. PR: M.E. 212 and 202. Mr. Husk

119. Mine Equipment and Machinery. II. PR: E. E. 102 and E. M. 212. Mr. Holland

120. **Thesis.** I, II. 2 to 4 Hrs. An individual problem on some phase of mining. None but exceptional students having high scholastic standing will be permitted to elect this course. Mr. Holland

*201. **Oil-Field Development.** I. 2 Hrs. PR: Geology 3. Mr. Laird

202. **Coal Laboratory.** I, II. 1 Hr. Coal Analysis. PR: Chemistry 6 or Chem. 15. Mr. Sandy

*203. **Geological Surveying.** II. 2 Hrs. PR: E. M. 101 and Geology 161. Mr. Laird

204. **Oil and Gas Production.** II. 4 Hrs. PR: E.M. 201 and M. 101; C.E. 115. Mr. Laird

205. **Gas Measurement Engineering.** II. 2 Hrs. PR: E. M. 201 and C. E. 115. Staff

206. **Elements of Geophysical Prospecting.** II. 3 Hrs. PR: Phys. 105, 106; Math. 108; Geol. 105. Mr. Laird

212. **Coal Mining.** II. 4 Hrs. Haulage, hoisting, and drainage. PR: E. M. 111. Mr. Husk

213. **Mine Ventilation.** I. 3 Hrs. PR: E. M. 212 and 107. Mr. Holland

GRADUATE DIVISION

301, 302. **Advanced Mine Design.** I, II. Credit to be arranged. Advanced detail design and layout of coal mine plant, particularly incorporating new ideas of machines and mining methods. Staff

351s. **Coal Mining.** SI. 3 Hrs. PR: Chemistry 10 hours, physics 8 hours, and accompanied or preceded by general geology. This course is designed especially for students who are planning to teach mining subjects in high school, and is not open to students taking E. M. 102s, 111, and 212. Hours to be arranged. Mr. Holland

397, 398. **Research.** I, II. Credit to be arranged. An individual problem in some phase of mining. A carefully prepared report is required. Mr. Holland

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The Graduate School

ORGANIZATION

By order of the Board of Governors of West Virginia University a University Graduate School is established, whose roots are implanted in all University undergraduate work, irrespective of departments or schools. The Graduate School is empowered (1) to direct research and investigation with particular reference to problems of the state and (2) to train and recommend to the Board of Governors candidates for the degrees of Master of Science, Master of Science in Home Economics Education, Master of Science in the various Engineering branches, Master of Arts, Master of Music, and Doctor of Philosophy.

All regulations governing the Graduate School such as the determination of curricula, projects, majors, minors standards, thesis requirements, and like and similar matters shall be formulated by the Graduate Council and presented to the Graduate Faculty for its consideration and action.

THE STUDENT BODY

Seniors in the colleges of West Virginia University who are within 10 semester hours of graduation may, with the approval of the Graduate Council, enroll for courses in the Graduate School, for which they may receive graduate credit after obtaining their bachelors' degrees. Such graduate courses must not have been offered for undergraduate credit, and in every case permission must have been requested before or at the time of enrolling for the course or courses.

THE ADVISER

The adviser will arrange a specific course of study to be approved by the Council and, in the case of candidates for advanced degrees, will preside at the candidate's qualifying and final examination.

REQUIREMENTS FOR GRADUATE DEGREES

(For a list of Graduate Degrees Offered see page 59.)

GENERAL REGULATIONS

1. *Candidacy*:

Admission to candidacy for any graduate degree is conditioned upon the fulfillment of the requirements for admission to the Graduate School, and also the particular requirements of undergraduate preparation for the field of study in which the student wishes to specialize. Detailed information concerning candidacy for the Master's degree and the degree of Doctor of Philosophy may be found on the pages immediately following.

2. *Scholarship*:

No credits are acceptable toward an advanced degree which are reported with a grade lower than C.

Reasonable standards of oral and written English must be maintained.

3. *Curriculum*:

Credit toward a graduate degree may be obtained only for courses listed in this Catalogue and numbered 200-399.

No more than fifteen hours of graduate courses in any one semester nor more than six hours of graduate courses in any one term of the summer session may be carried by a student. Any exceptions to this rule must be approved in advance by the Graduate Council.

4. *Residence and Extension*:

Residence credit for special field assignments and for work taken off the University Campus shall be allowed only with the prior approval of the Graduate Council.

No more than 15 hours of extension work may be counted by any one student toward the Master's degree.

The maximum credit that students pursuing graduate work by extension may receive in any one field shall be 8 semester hours.

No more than 6 hours of graduate credit obtained in other approved institutions may be considered in meeting the requirements for the Master's degree in West Virginia University. Graduate credit so accepted toward the Master's degree must meet the usual departmental requirements for a continuous and unified program of graduate study and will reduce correspondingly the number of hours of graduate work by extension offered in West Virginia University extension centers that may be offered in meeting the requirements for the Master's degree.

The time during which credit may be acquired in extension offered by institutions outside the state shall be limited in any area as determined by the University Committee on Extension and properly publicized by the Director of Extension.

Each graduate student in residence, whether taking course work or engaged in conducting research or in writing a thesis or report, must register at the beginning of each semester or term during which graduate work is being done. He must be registered during the session in which he is to appear for final examination. Under exceptional conditions and with the prior approval of the Graduate Council a graduate student may be permitted to meet a portion of the requirements for the degree in absentia, provided the customary residence and other requirements are met.

5. *Credit by examination*:

The Graduate Council will allow credit for educational experience in the Armed Forces in partial satisfaction of advanced degree requirements for courses of the 200-399 series established by the Committee on Entrance by evaluation and/or by examination. For the Master's degree, veterans may receive a maximum of six (6) hours of credit by examination for work taken in the Armed Forces, but credit so obtained will reduce correspondingly the amount permitted by transfer from another institution. Such credit, however, will not serve to reduce graduate-degree residence requirements.

6. *Theses and Problem Reports*:

All theses and problem reports shall be presented in the form prescribed by the Graduate Council at least one month previous to the Commencement Day on which the degree is expected. If the thesis or problem report is accepted, typewritten and bound copies shall be submitted to the Secretary of the Graduate Council at least one week before the degree is to be conferred; a minimum of five copies of the master's or doctor's thesis or problem report is required.

7. *Final Examinations*:

The candidate shall not be eligible for the final examination until his thesis or problem report has been approved by the examining committee. Following the approval of the candidate's thesis or problem report and the satisfactory completion of the courses in residence and the satisfaction of other graduate requirements, he shall be given a final examination by his advisory committee.

8. *Commencement*:

At the time of registration for the semester or session in which the candidate expects to receive a graduate degree, he shall submit a formal request to the Chairman of the Graduate Council for the conferring of such degree. The candidate must have completed all requirements for the degree which he wishes to receive, at least one week before Commencement Day.

THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Requirements for Candidacy

Satisfactory fulfillment of General Regulation No. 1 for graduate degrees (stated on page 253) will admit an applicant to candidacy.

Requirements for Completion

The completion within a period of 7* years immediately preceding the conferring of the degree except with the permission of the Graduate Council, of no less than 30 credit hours of graduate work approved by the adviser.

RESIDENCE: A minimum is required of two semesters, or one semester and three summer terms, or five summer terms of residence in full-time graduate study at West Virginia University. For students offering 15 credit hours in extension, a minimum period of residence at West Virginia University of one semester or three summer terms shall be required for the Master's degree.

THESIS OR PROBLEM REPORT: A thesis or problem report granting no more than 6 hours of credit may be required by the faculty of the college, school, or department in which the candidate's major interest lies.

FINAL EXAMINATION: An examination, oral or written or both at the option of the candidate's examining committee, shall be required, covering the candidate's thesis or problem report, studies in his major and minor fields, and his ability to apply facts and principles.

SPECIAL REQUIREMENTS: The candidate must meet the special requirements of the department in which he pursues his major study.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Requirements for Candidacy

Admission to the Graduate School and enrollment in graduate courses does not of itself imply acceptance of the applicant for a doctor's degree. After a period of residence the applicant will be admitted to a comprehensive preliminary or qualifying examination (either oral or written or both) in which he must demonstrate (a) a grasp of the important phases and problems

*This ruling was discontinued temporarily during the war period. It was reinstated, effective June 1, 1948, as follows:

Beginning with the first summer term of 1948, the seven-year rule will again be put into effect with the provision that, in the cases of students who have already started their graduate programs, the adviser and the chairman of the Graduate Council will determine whether work taken before the seven-year period shall be accepted for credit. If the adviser and the chairman of the Graduate Council cannot agree, the case shall be brought before the Graduate Council for review. In the event that a graduate student began work during the war period, an extension up to a maximum of five years may be granted.

of the field of study in which he proposes to major and an appreciation of their relation to other fields of human knowledge and accomplishments. (b) the ability to employ rationally the instruments of research that have been developed in his major field, and (c) the ability to read French and German to the satisfaction of his examining committee.[1]

When an applicant has successfully passed his qualifying examination he will be formally promoted to candidacy for the doctor's degree. Admission to candidacy must precede the final examination for the doctor's degree by at least one academic year. Graduate courses pursued in fulfillment of the requirements for the Master's degree, if of suitable character and quality, may be credited toward the doctorate.

Requirements for Completion

(a) CURRICULUM: The degree of Doctor of Philosophy is not awarded for the mere accumulation of course credits nor for the completion of a definite residence requirement. The exact amount and nature of course work to be undertaken by a candidate will be determined in the light of his previous preparation and the demands of his chosen field of application. The aggregate of correlated courses of graduate instruction should, however, be no less than 60 semester hours, exclusive of research or thesis, except research or thesis credits earned for the Master's degree. These credits shall be ordered and distributed so as to promote broad and systematic knowledge and the ability to carry on independent research.

(b) RESIDENCE: In general the requirements for the Doctor of Philosophy degree contemplate at least three years of full-time graduate work beyond the bachelor's degree. A minimum of 36 weeks in residence in full-time graduate study at West Virginia University is required.

(c) THESIS: The candidate must submit a thesis pursued under the direction of the faculty of this University on some problem in the field of his major interest. The thesis must present the results of the candidate's individual investigations and must embody a definite contribution to knowledge.

(d) SPECIAL REQUIREMENTS: The candidate must satisfy such special requirements subject to the approval of the Graduate Council, as may be required by the faculty of the college or department in which his major lies. All required examinations in modern languages shall be taken not later than one academic year before the final examination for the degree.

(e) FINAL EXAMINATION: If the candidate's thesis is approved and he has fulfilled all other requirements stated above, he will be admitted to final oral examination on his thesis before his examining committee. At the option of this committee, a comprehensive written examination may also be required.

[1]With the approval of the Graduate Council, one other language may be substituted for French or German.

The School of Journalism

GENERAL INFORMATION

History

The first instruction in journalism at West Virginia University consisted of a two-hour course in news writing offered in 1915 in the Department of English of the College of Arts and Sciences. A sequence of professional courses was inaugurated by the same department in 1920. As the demand increased, a complete professional curriculum was made available. In 1927 an additional full-time instructor was engaged, larger quarters were obtained, and a separate Department of Journalism was created.

In consequence of the substantial development over nearly two decades and in view of the rapid advancement of professional schools of journalism throughout the nation, the University Board of Governors on April 22, 1939, separated the journalism unit from the College of Arts and Sciences and reorganized it as a School of Journalism with an administrative status similar to that of other schools and colleges of the University. Since that time the School has conferred the degree of Bachelor of Science in Journalism on 103, of whom 37 are men. Since 1920 the University has graduated 268 persons, of whom slightly more than half are men, with jouralism as a major field of study. A fourth full-time instructor was added in 1946. To expand and intensify the instruction in newspaper advertising and administration, five lecturers in journalism were engaged for the first semester of 1947-48.

Aims

The main purposes of the school are these: (1) to find and prepare superior young men and young women who contemplate reporting and other journalistic writing, or the editing and management of newspapers or special periodicals, as a career; (2) to provide in addition to thorough and complete technical training the broad informational background and sure intellectual discernment that distinguish educated persons; (3) to cultivate a full sense of the responsibility that modern newspaper men and women must assume in their relation to the community, state, and nation, and familiarize them with tested procedure in pursuing objectives of high social value; (4) to stimulate an inquiring attitude toward journalism as an institution and promote scholarly research in its various branches; (5) to furnish a suitable educational foundation for persons looking forward to business or professional work closely related to journalistic practice.

Standards

From the beginning the instruction in journalism at West Virginia University has been in accord with the best professional-school standards. The emphasis has ever been on quality, not numbers. Only students with a scholastic rating of approximately B or higher have been encouraged to take the basic courses in reporting, and those not able to maintain an equally high standard in the first journalism courses have been requested to choose a major elsewhere.

The instructional staff has been engaged with careful attention to their individual ability to give expert instruction in particular fields. The curriculum has been kept constantly abreast of progress in leading educational centers. Class sizes have never reached proportions where individual instruction had to be sacrificed. The school now conforms to recognized national standards, especially those required by the American Society of Journalism School Administrators, and is ranked with the superior professional schools of the United States.

Practice Opportunities

Opportunities for applying the principles of sound newspaper practice are good. The Daily Athenaeum, a five-day campus newspaper, is produced by journalism students in the various workrooms of the school where laboratories are conducted from 2 to 5 p. m. and from 7:30 to 10:30 p. m. every day except Saturday and Sunday. Reporters working on news runs cover the University community thoroughly, and trained deskworkers not only edit the local reporters' copy but also prepare for publication the dispatches of state, national, and world origin received by United Press teletype. Local pictures are taken by the campus newspaper's own staff photographer, and other news pictures are selected from mats purchased from a national distributor.

All reporters serve as correspondents of weekly and daily newspapers. Majors pursuing the advertising-management sequence are required to spend no fewer than five hours a week soliciting advertising accounts for the campus daily, writing copy and otherwise servicing their accounts, and making collections for advertising sold. Some students get additional practice by working part-time for Morgantown dailies or by taking vacation positions on newspapers of their home community. Majors are especially urged to obtain vacation work on a good weekly or daily newspaper during the summers that precede their junior and senior years. As a rule, student journalists have staff positions on, or are regular contributors to, other campus publications.

ADMISSION

Regular Students

A candidate seeking admission to the School of Journalism with the view of obtaining a degree must have satisfied the requirements for matriculation in one of the University undergraduate colleges and must have earned at least 58 semester hours of college credit. A student deficient in physical education and military science will be required to obtain them as soon as possible.

During his freshman and sophomore years he should have completed satisfactorily all or most courses specified for pre-journalism majors. A regularly enrolled student may elect courses numbered below 100 provided such action will be advantageous in connection with a major or minor sequence and provided the total credit value of such courses does not exceed 12 hours. For all such courses, however, in excess of 6 hours taken during any one semester the maximum number of honor points that may be acquired will be one for each hour of credit. A pre-journalism student not maintaining at least a C average during his first two years in all college subjects is strongly advised not to enroll in the professional school.

Typewriting and Shorthand

Before or soon after entering the University, a student planning to become a journalism major should learn the touch system of typewriting. From the beginning every reporter is expected to submit copy in neat typewritten form and to have a typing speed of no fewer than 40 words a minute. If after 8 weeks the reporter cannot demonstrate such typing ability, he may be asked to withdraw from the reporting course. He will find it especially advantageous to have his own machine.

Persons training for book-publishing or advertising-agency work and those expecting to become secretaries or assistants to executives find shorthand either desirable or indispensable. Such students are advised to learn it before coming to college or during their freshman or sophomore year.

The Degree

A candidate who has satisfied all general requirements of the University and who as a regularly enrolled student of the School of Journalism has earned 64 semester hours of credit of a value specified in the foregoing and in the subjects listed in one of the professional curricula hereinafter outlined will be recommended for the degree of Bachelor of Science in Journalism, provided the combined number of his credits acquired as a pre-journalism student and as a regularly enrolled journalism major totals no fewer than 128. As a minimum professional requirement, 25 of the 64 semester credits earned after the student has enrolled in the school must be obtained in journalism subjects. Moreover, no fewer than 60 of the 64 hours mentioned above shall be obtained in courses numbered between 100 and 300.

To be eligible for graduation, a student must have completed 12 semester hours in one language or 6 semester hours in each of two foreign languages in college; or he must have offered 2 units in a modern foreign language for entrance and must have completed 6 hours in the same language in college. He must also have acquired 8 hours of credit in one of the following laboratory sciences: biology, botany, chemistry, geology, physics, psychology, and zoology.

The Minor Field

Since the prospective newspaper worker needs the broadest and most thorough education possible, he will find his opportunities and usefulness enlarged if while in the professional school he devotes himself to a second field of concentration. To meet the requirements for a minor, he must earn at least twelve semester hours of credit in some other subject than journalism, nine of which must be in junior and senior courses.

Minors especially recommended for journalism students are business administration, economics, education, English, history, political science, and sociology. Since there is a growing demand for journalistic writers who can interpret developments in agriculture, astronomy, chemistry, home economics, physics, and other related subjects, students with sufficient technical background will be encouraged to select a minor in one of these scientific fields.

CURRICULA

The School of Journalism offers three curricula designed to fit students for specialized branches of journalistic practice or for occupations or professions for which journalistic training is desirable or necessary preparation. Each sequence leads to the degree of Bachelor of Science in Journalism.

The News-Editorial Curriculum

The news-editorial sequence is designed primarily for the student who wishes to prepare himself for work as a reporter, copyreader, special writer, or departmental editor and who hopes to advance later to a still more responsible position in the general news and editorial field.

THE THIRD YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 103—Copy Editing	3	Jour. 104—Copy Editing	3
Jour. 105—Applied Newspaper Management	2	Jour. 106—Applied Newspaper Management	2
Jour. 127—Hist. of American Jour.	3	Soc. 102—Intro. to Sociology	3
Jour. 113—Principles of Advertising	3	Jour. 220—Newspaper and Magazine Article Writing	3
Pol. Sci. 106—Amer. State and Local Government	3	Eng. 142—Shakespeare	3
Electives	2-4	Advanced Political Science	3
		Electives	2-4
	16-18		16-18

THE FOURTH YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 230—Editorial Writing and Policy	3	Jour. 231—Social Responsibility of Journalism	3
Jour. 221—Critical Writing	2	Jour. 128—Adv. Reporting	3
Eng. 180 or Eng. 181—Bible Literature	3	Jour. 210—Law of the Press	2
Phil. 104—Intro. to Philosophy	3	Advanced social science or literature or language	3-7
Electives	5-7	Electives	8-10
	16-18		16-18

The Advertising-Management Curriculum

The advertising-management professional sequence is arranged for the student who expects to enter some branch of the business department of a newspaper and who looks forward sooner or later to the management or ownership of a publication Opportunities in the business department are considered even better than in the news-editorial branch.

THE THIRD YEAR

First Semester	*Hrs.*
Jour. 103—Copy Editing	3
Jour. 105—Applied Newspaper Management	2
Jour. 110—Newspaper Typography	2
Jour. 113—Principles of Advertising	3
Pol. Sc. 106—Amer. State and Local Government	3
Bus. 5—Principles of Accounting	3
Electives	0-2
	16-18

Second Semester	*Hrs.*
Jour. 106—Applied Newspaper Management	2
Jour. 112—Publicity, Propaganda, and the Public Mind	2
Jour. 114—Advertising Copy and Sales	4
Geol. 109—Economic Geography	3
Bus. 6—Principles of Accounting	3
Electives	2-4
	16-18

THE FOURTH YEAR

First Semester	*Hrs.*
Jour. 230—Editorial Writing and Policy	3
Eng. 142—Shakespeare, or Eng. 180 or Eng. 181—Bible Literature	3
Soc. 102—Intro. to Sociology	3
Econ. and Bus. Administration	6
General Electives	1-3
	16-18

Second Semester	*Hrs.*
Jour. 108—Community Newspaper	2
Jour. 231—Social Responsibility of Journalism	3
Jour. 128—Adv. Reporting	3
Jour. 210—Law of the Press	2
Pol. Sci. 107—Amer. City Gov't.	3
Econ. and Bus. Administration	3-5
	16-18

The General Curriculum

The general curriculum is planned for the following classes of majors: (a) those wishing to make journalism a special field of concentration while getting a broad, general education of modern content; (b) those expecting to follow radio journalism as a career; (c) those preparing to take a position in high school as teacher of journalism, English, and social sciences and as director of student publications; (d) those looking forward to work on specialized business and trade periodicals, on household magazines and newspaper women's pages, or on agricultural and scientific publications; (e) those desiring to be public-relations writers or directors or to enter the Federal or state civil service; and (f) those fitting themselves for secretaries or assistants to executives.

THE THIRD YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 103—Copy Editing	3	Jour. 112—Publicity, Propaganda, and the Public Mind	2
Jour. 122—Elements of Radio Jour.	2	Jour. 220—Newspaper and Magazine Article Writing	3
Jour. 127—Hist. of Amer. Journalism	3	Soc. 102—Intro. to Sociology	3
Pol. Sc. 106—Amer. State and Local Government	3	Geol. 109—Economic Geography	3
Electives in second field of concentration*	5-7	Electives in second field of concentration*	5-7
	16-18		16-18

THE FOURTH YEAR

First Semester	*Hrs.*	*Second Semester*	*Hrs.*
Jour. 230—Editorial Writing and Policy	3	Jour. 108—Community Newspaper	2
Jour. 221—Critical Writing or Advanced Eng. Composition	2	Jour. 128—Adv. Reporting	3
Jour. 113—Principles of Advertising	3	Jour. 231—Social Responsibility of Journalism	3
Phil. 104—Intro. to Philosophy	3	Electives in second field of concentration*	8-10
Eng. 142—Shakespeare	3		
Electives in second field of concentration*	2-4		
	16-18		16-18

GRADUATE STUDY

Although at the present time the School of Journalism is devoting its instructional facilities chiefly to professional curricula that lead to the degree of Bachelor of Science in Journalism, it frequently provides a graduate minor for students taking the master's degree in a field of specialization related to journalism.

THE PLACEMENT OF GRADUATES

During the last two and one-half decades alumni who had completed all or most of the professional courses in journalism have found little difficulty in finding desirable positions. Although the school cannot guarantee positions to graduates, it is glad to assist them in learning of openings and in making contact with employers. To this end it maintains without charge a placement register for both current and past graduates. Students and alumni are also invited to make free use of the University Placement Service in charge of H. E. Stone, secretary of loans and placement.

*In his second field of concentration a student pursuing the General Curriculum must acquire, before graduation, at least 18 hours of credit in subjects bearing directly on his contemplated vocation. In sequence (b), he will give special attention to newswriting, news commentary, continuity writing, program building, commercial copywriting, and radio advertising. In sequence (c), he will take 20 hours of professional-education courses. In sequence (f), he will include business mathematics, business communications, secretarial training, a year of shorthand, and other similar courses adapted to his anticipated vocational need.

COURSES OF INSTRUCTION

Professor REED; Assistant Professor SORELLE; Instructor BOND; Teaching Fellows EBY and KIDD; Lecturers BIERER, DUFF, HAYMAN, GRAY, and SCHMIDT

1A. Introduction to United States Journalism. II. 1 Hr. PR: English 1 with a grade of C or higher Required of pre-journalism freshmen and open to others. Staff

1. Newspaper Reporting. I, II, S. 3 Hrs. Two lectures and three laboratory hours. Students are required to know how to use typewriter or to acquire such knowledge during the first half of the semester. PR: English 1 and 2, with an average of 1.5 or higher for the two courses Staff

2. Newspaper Reporting. I, II, S. 3 Hrs. Two Lectures and three laboratory hours. Continuation of Journalism 1, which is prerequisite. Staff

103. Copy Editing. I, II. 3 Hrs. PR: Journalism 1 and 2 or consent of instructor. Mr. Bond

104. Copy Editing. I, II. 3 Hrs. PR: Journalism 103 or consent of instructor. Mr. Bond

105. Applied Newspaper Management. I. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 or consent of instructor. Staff

106. Applied Newspaper Management. II. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1, 2, and 105 or consent of instructor. Staff

108. The Community Newspaper. II. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Staff

110. Newspaper Typography. I, II. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Staff

112. Publicity, Propaganda, and the Public Mind. II, S. 2 Hrs. Miss Sorelle

113. Principles of Advertising. I, S. 3 Hrs. Staff

114. Advertising Copy and Sales. I, II. 4 Hrs. Practical application of advertising principles, with stress on newspaper advertising. Preparing newspaper layouts, writing retail copy, and servicing local newspaper accounts. Two lecture and conference hours and five laboratory hours a week. Limited enrollment. PR: Jour. 113 or adequate grounding in advertising principles. Staff

120. News Photography. I, S. 2 Hrs. PR: Journalism 1 and 2 or consent of instructor. Miss Sorelle

122. Elements of Radio Journalism. I, S. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 or consent of instructor. Miss Sorelle

123. Advanced Radio Writing. II. 2 Hrs. One lecture and two laboratory hours. PR: Journalism 1 and 2 and Journalism 122 or consent of instructor. Miss Sorelle

127. History of American Journalism. I. 3 Hrs. Miss Sorelle

128. Advanced Reporting. II. 3 Hrs. For seniors in journalism. Mr. Bond

210. Law of the Press. II 2 Hrs. For seniors and graduates. Miss Sorelle

215. **High-school Journalism and Student Publications.** II, S. 2 Hrs. Mr. Bond

220. **Newspaper and Magazine Article Writing.** II. 3 Hrs. For juniors, seniors, and graduates. Mr. Reed

221. **Journalistic Critical Writing.** I. 2 Hrs. For seniors and graduates. Mr. Reed

230. **Editorial Writing and Policy.** I. 3 Hrs. For seniors and graduates. Mr. Reed

231. **Social Responsibility of Journalism.** II, S. 3 Hrs. For seniors and graduates. Mr. Reed

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The College of Law

HISTORY AND ORGANIZATION

The College of Law, established in 1878, is the oldest professional school in the University.

In 1897 the course of study was increased from one year to two years. Since 1912 the degree of Bachelor of Laws has been conferred only upon the satisfactory completion of three years of law-school work. From 1913 to 1924 the requirement for admission was one year of college work; from 1924 to 1931 the requirement was two years. Since 1931 the minimum pre-law requirement for the degree has been three years of work of collegiate grade in an institution of approved standing.

In 1914 the College of Law was admitted to membership in the Association of American Law Schools, which is an organization of leading schools for the purpose of maintaining high standards in legal education. The College of Law is on the list of schools approved by the American Bar Association.

THE PROGRAM OF INSTRUCTION

It is the primary aim of the Law School to give the student an adequate preparation for the practice of law. This involves not merely imparting a knowledge of the legal rules and other materials which courts employ, but also, what is equally important, a training in the technique of legal thinking. The work of the student is based chiefly upon the study and discussion of decided cases and statutes, with collateral reading of textbooks and periodicals, elucidated by free discussion in the class. Special emphasis is given to those West Virginia cases and statutes which differ from the general law. Within limits, the school also seeks to inculcate an appreciation of the place of law in the ordering of society and to consider the problem of how law may more effectively adjust human relations.

The following program of instruction is designed with these ends in view. The work of the first year is prescribed. All courses other than first-year courses are elective. Neither fewer than 13 nor more than 16 hours may be carried without the consent of the Committee on Scholarship.

[1]The program of courses as given here is subject to change.

FIRST-YEAR COURSES

Agency. 2 Hrs.
Two hours a week in the first semester. Mechem, Cases on Agency (3d ed.). Mr. Colson

Common Law Remedies. 2 Hrs.
Two hours a week in the first semester. Cook, Readings on Forms of Action at Common Law. Mr. Carlin

Contracts. 6 Hrs.
Three hours a week throughout the year. Williston, Cases on Contracts (4th ed.). Mr. Donley

Criminal Law. 3 Hrs.
Three hours a week in the first semester. Harno, Cases on Criminal Law and Procedure (2d ed.). Mr. Lugar

Equity I. 3 Hrs.
Three hours a week in the second semester. Chafee and Simpson, Cases on Equity. Mr. Lugar

Persons. 2 Hrs.
Two hours a week in the first semester. Madden and Compton, Cases on Domestic Relations. Mr. Colson

Property I. 6 Hrs.
Three hours a week throughout the year. Bigelow, Cases on Personal Property (3d ed.), and Aigler, Cases on Titles (3d ed.). Mr. Goodwin

Torts. 6 Hrs.
Three hours a week throughout the year. Bohlen, Cases on Torts (4th ed. by Harper). Mr. Dickinson

COURSES OPEN TO SECOND-YEAR AND THIRD-YEAR STUDENTS

Administrative Law. 4 Hrs.
Four hours a week in the first semester. Gellhorn, Cases on Administrative Law (2d ed.). Mr. Abel

Coal, Oil and Gas. 3 Hrs.
Three hours a week in the second semester. Kulp, Cases on Oil and Gas. Mr. Donley

Common Law Pleading (including Drafting of Pleadings). 4 Hrs.
Four hours a week in the second semester. Sunderland, Cases on Common Law Pleading (2d ed.). Mr Carlin

Conflict of Laws. 4 Hrs.
Four hours a week in the second semester. Beale, Cases on Conflict of Laws (3d ed. by de Sloovere). Mr. Dickinson

Constitutional Law. 4 Hrs.
Four hours a week in the second semester. McGovney, Cases on Constitutional Law and Supplement. Mr. Abel

Corporations. 4 Hrs.
Four hours a week in the first semester. Dodd and Baker, Cases on Business Associations, Corporations. Mr. Colson

Credit Transactions. 4 Hrs.
Four hours a week in the first semester. Sturges, Cases on Credit Transactions (3d ed.). Omitted in 1948-49. Mr. Colson

Damages. 2 Hrs.
Two hours a week in the first semester. McCormick, Cases on Damages. Mr. Dickinson

Equity II. 3 Hrs.
Three hours a week in the first semester. Walsh, Cases on Equity. Mr. Lugar

Equity Pleading and Practice. 2 Hrs.
Two hours a week in the first semester. Prerequisite: Common Law Pleading. Clephane, Equity Pleading and Practice, and selected cases and statutes. Mr. Carlin

Evidence. 4 Hrs.
Four hours a week in the first semester. Morgan and Maguire, Cases on Evidence (2d ed.). Mr. Hardman

Federal Procedure. 2 Hrs.
Two hours a week in the first semester. Dobie and Ladd, Cases on Federal Jurisdiction and Procedure. Mr. Abel

Insurance. 2 Hrs.
Two hours a week in the first semester. Patterson, Cases on Insurance (2d ed.). Mr. Lugar

Labor Law. 3 Hrs.
Three hours a week in the second semester. Handler, Cases on Labor Law. Mr. Lugar

Landlord and Tenant. 2 Hrs.
Two hours a week in the second semester. Jacobs, Cases on Landlord and Tenant (2d ed.). Mr. Goodwin

Municipal Corporations. 2 Hrs.
Two hours a week in the second semester. Tooke and McIntire, Cases on Municipal Corporations (2d ed.). Mr. Colson

Negotiable Instruments. 3 Hrs.
Three hours a week in the second semester. Smith and Moore, Cases on Bills and Notes (4th ed.). Mr. Dickinson

Property II. 2 Hrs.
Two hours a week in the first semester. Bigelow, Rights in Lands. Mr. Goodwin

Property III. 3 Hrs.
Three hours a week in the second semester. Leach, Cases on Future Interests (2d ed.). Mr. Goodwin

Practice and Procedure. 4 Hrs.
Four hours a week in the first semester. Prerequisite: Common Law Pleading. Selected cases, statutes, and lectures. Mr. Carlin

Practice Court. 2 Hrs.
Two hours a week in the second semester. Prerequisite: Common Law Pleading and Practice and Procedure. Mr. Carlin

Public Utilities. 4 Hrs.
Four hours a week in the second semester. Casebook to be announced. Mr. Hardman

Quasi Contracts. 3 Hrs.
Three hours a week in the first semester. Thurston, Cases on Restitution. Mr. Donley

Sales of Personal Property. 2 Hrs.
Two hours a week in the first semester. Vold, Cases on Sales. Omitted in 1948-49. Mr. Abel

Taxation. 4 Hrs.
Four hours a week in the second semester. Bruton, Cases on Taxation. Mr. Abel

Trusts. 4 Hrs.
Four hours a week in the second semester. Scott, Cases on Trusts (3d ed.). Mr. Colson

Use of Law Books. 1 Hr.
One hour a week in the first semester. Casebook to be announced. Mr. Dickinson

Wills and Administration. 2 Hrs.
Two hours a week in the first semester. Casebook to be announced. Mr. Goodwin

THE PRACTICE COURT

Supplementing the procedural courses and, in particular, the courses in Practice and Procedure, the College of Law conducts a Practice Court under the instruction and direct supervision of a member of the faculty. Its primary purpose is to give the students practical experience in coordinating and applying, in an actually litigated case, the legal knowledge which they have acquired in their classroom courses. The cases are tried exactly as they would be tried in an ordinary court. The first session is presided over by Professor Carlin, who has charge of the course in Practice Court, and the other sessions are presided over by a judge of the Supreme Court of Appeals or of one of the circuit courts of West Virginia.

The court exercises original jurisdiction in law and equity, and appellate jurisdiction in appeals from inferior tribunals. Statements of facts are furnished, such as would be related to a lawyer in active practice by his client. Each student must determine whether or not upon such facts the particular case in hand is one of common law or equity. He must then frame his pleadings, serve his summons or notice, and answer his adversary's pleadings until issue is joined in legal manner. Thereupon the case is brought on for trial or hearing in strict accordance with legal procedure, witnesses are examined and cross-examined, and the case is conducted through all the various stages of trial or hearing down to and including the judgment, decree, or sentence; after which, should the case be appealed, it must be carried through the Supreme Court, involving the preparation of the record on appeal, briefs of counsel, and argument.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF LAWS

The degree of Bachelor of Laws is conferred upon those who have met the requirements for entrance to the College of Law as candidates for this degree and who have satisfactorily passed examinations in courses aggregating eighty-one credit hours, distributed over three years' residence, and who have obtained an average grade of C[1] as hereinafter provided. Except with the permission of the Scholarship Committee these eighty-one hours must be taken in no more than six semesters or the equivalent thereof in summer school, and the last twenty-seven hours of work must be taken in the College of Law of West Virginia University. When a student, because of admission with advanced standing from another law school, needs less than eighty-one hours in order to satisfy the requirements for this degree, the C average required for graduation is computed on the basis of work taken in the College of Law. No student may receive the degree of Bachelor of Laws without at least three semesters in residence at the College of Law and the successful completion of courses aggregating at least one-half of the total number of hours required for graduation.

[1]The C average requirement does not apply to students who entered before the fall of 1939. For rules governing such students see the Law School Bulletin for 1938-39.

GENERAL REGULATIONS

Written examinations are held at the end of each semester in all courses. Reports of students' grades are made at the end of each semester.

All courses extend either through the entire year or through one semester. No credit will be given for less than an entire course except by special order of the Committee on Scholarship. A grade given at the end of the first semester in a course extending throughout the year does not carry credit, but such first-semester grade may be considered in determining the final grade.

Final grades are based primarily on the written examinations. But in determining a grade the instructor may give such weight as he deems best to daily recitations or other classroom assignments. He may refuse examination to any student because of poor attendance.

No student who absents himself from any regular examination without being excused therefrom by the faculty of the College of Law will receive credit unless he successfully repeats the course. If absence from a final examination is permitted by the faculty, the student's grade in that course will be withheld until he has passed the next regular examination in the course. Application for leave to be absent from a regular examination must be made before the hour at which such examination closes.

To be graduated, a student must obtain an average grade of C, computed on the basis of all work taken during the first three years or on the basis of the first 81 hours, if the student has not taken the required 81 hours during the first three years.[2]

A student who at the end of the third or any subsequent semester has a grade of D or less in more than half his work, computed on the basis of the total number of hours which he has taken, shall be excluded permanently from the College of Law.[2]

A student who fails to pass more than half his work, computed on the basis of hours carried during any semester, shall be suspended. Upon application to the Scholarship Committee, a student so suspended, unless excluded under the preceding rule, may be readmitted, but with the understanding that if he again fails to pass half his work he shall be excluded permanently from the Law School.

Students in Other Colleges

Students of at least senior standing in other colleges of the University may be permitted to take work in the College of Law subject to the regulations of the colleges where they are registered and of the College of Law, but conditioned in each case upon the consent of the instructor giving the course which such students desire to take.

ADMISSION TO THE BAR

Under the provisions of the West Virginia Code 1931, ch. 30, art. 2, sec. 1, those who receive the degree of Bachelor of Laws from West Virginia University may be admitted to the bar without further examination.

All persons seeking admission to the West Virginia bar, except those who

[2]This rule does not apply to students who entered before September, 1939. For rules governing such students see the Law School Bulletin for 1938-39.

hold the degree of Bachelor of Laws from West Virginia University, are required to pass the state bar examination.

Information as to the bar examinations and as to other matters relating to admission to the bar may be obtained upon inquiry directed to the Secretary, State Board of Law Examiners, Charleston, West Virginia.

THE WEST VIRGINIA LAW QUARTERLY

The West Virginia Law Quarterly is published in December, February, April, and June by the College of Law. It is the official publication of the West Virginia Bar Association.

The editors of the Student Note and Recent Case Department of the Law Quarterly are members of the second- and third-year classes, chosen each year from those students who made the highest grades in the preceding year. This department affords to students an opportunity to do research work of a practical nature.

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School of Medicine

INSTRUCTION IN MEDICINE

Regular instruction in subjects preparatory to the study of medicine was first given in West Virginia University in 1871, the chair of anatomy, physiology, and hygiene having been established in that year. A curriculum covering the first two years of a standard four-year medical course was provided in 1902, and the work was placed in charge of the College of Medicine with a resident faculty of six men. In 1912 the College of Medicine became the School of Medicine. In reorganizing the work in medicine the Board of Regents retained the general character of the curriculum previously offered but provided for a larger faculty, more laboratories, and more adequate equipment.

The School of Medicine is listed as a Recognized School of Basic Medical Sciences by the Council on Medical Education and Hospitals of the American Medical Association. It is also a member of the Association of American Medical Colleges.

Agreement With Medical College of Virginia

Only the first two years of medicine are given at West Virginia University. There has been made an agreement with the Medical College of Virginia at Richmond for the transfer of as many as twenty students, residents of West Virginia, who have completed the first two years at West Virginia University. At the Medical College of Virginia these students pay the same tuition as paid by the residents of Virginia. Upon graduation, diplomas are issued jointly by the two schools. Other students in the class may, as in the past, transfer to various medical schools for the completion of their work.

THE STANDING COMMITTEES

EXECUTIVE: E. J. VAN LIERE (*chairman*), G. S. DODDS, F. R. WHITTLESEY, and C. B. PRIDE.

ADMISSIONS AND SCHOLARSHIP: G. S. DODDS (chairman), S. B. CHANDLER, P. L. MACLACHLAN, C. K. SLEETH, and M. L. HOBBS.

LIBRARY: S. B. CHANDLER (*chairman*), J. C. STICKNEY, P. L. MACLACHLAN, C. K. SLEETH, and J. M. SLACK.

RESEARCH: E. J. VAN LIERE (*chairman*), D. W. NORTHUP, D. F. MARSH, and P. L. MACLACHLAN.

SEMINARS: G. S. DODDS (*chairman*), J. C. STICKNEY, E. J. VAN LIERE, C. K. SLEETH, and J. M. SLACK.

CLINICAL AND SPECIAL FACILITIES: J. J. LAWLESS (*chairman*), C. B. PRIDE, M. L. HOBBS, G. R. MAXWELL, F. R. WHITTLESEY, and C. K. SLEETH.

CURRICULUM: C. K. SLEETH (*chairman*), P. L. MACLACHLAN, E. J. VAN LIERE, D. F. MARSH, and G. S. DODDS.

STUDENT LOANS AND SCHOLARSHIPS: E. J. VAN LIERE (*chairman*), G. S. DODDS, P. L. MACLACHLAN, and J. C. STICKNEY.

POLICY: Heads of departments and the director of the University Health Service.

The John Nathan Simpson Lectureship

In 1933 the West Virginia chapter of the Phi Beta Pi medical fraternity instituted the John Nathan Simpson Lectureship, honoring Dr. John N. Simpson, Dean Emeritus of the School of Medicine, giving an annual lecture by some one distinguished in medical research or practice.

REQUIREMENTS FOR DEGREES

The School of Medicine gives no degrees in medicine (except as noted on preceding page), inasmuch as only the first two years of medicine are given. It, however, cooperates with the College of Arts and Sciences in granting the Bachelor of Science degree, upon the completion of the two years of medical work, to those students who comply with certain requirements of the College of Arts and Sciences.

For a suggested curriculum for premedical students see page 132.

Curriculum in Medical Technology

The School of Medicine conducts a curriculum in Medical Technology leading to the degree of Bachelor of Science (Medical Technology). During the first two years students are registered in the College of Arts and Sciences; during the last two years in the School of Medicine. For further details see page 139.

THE COURSES OF INSTRUCTION

NOTE—Courses marked "[1]" are required of first-year students; those marked "[2]" are required of second-year students.

In addition to the required courses there are listed some elective courses for the benefit of other University students who may need them. They are given only when, in the opinion of the department concerned and of the Dean, it is considered advisable. If there should arise a demand for any of these courses, the Medical School will try to meet the need, but the schedule will be contingent upon the extent to which staff members are occupied with the required medical courses.

THE SCHEDULE OF COURSES FOR 1948-49

	Hrs. per week			Hrs. per semester			Semester Hours' Credit
	Lect.	Lab.	Total	Lect.	Lab.	Total	
First Year — First Semester							
Gross Anatomy 201	2	8	10	32	128	160	6
Histology 211	3	9	12	48	144	192	6
Biochemistry 231	4	9	13	64	144	208	7
First Year — Second Semester							
Gross Anatomy 202	2	6	8	32	96	128	4
Neuro-Anatomy 203	2	6	8	32	96	128	4
Embryology 212	2	0	2	32	0	32	2
Medical Bacteriology 221	3	9	12	48	144	192	6
Physiology 242	2	3	5	32	48	80	3
Second Year — First Semester							
Physiology 243	5	6	11	80	96	176	7
Gen. and Tumor Pathology 251	5	9	14	80	144	224	7
Pharmacodynamics 262	3	0	3	48	0	48	3
Hygiene 222	2	0	2	32	0	32	2
Introductory Medicine 272	0	2	2	0	32	32	*
Psychobiology 273	1	0	1	16	0	16	1
Biostatistics 274	1	0	1	16	0	16	1
Physical Diagnosis 271	1	0	1	16	0	16	*
Second Year — Second Semester, First Half							
Applied Anatomy 204	2	4	6	16	32	48	2**
Clinical Pathology 252	2	4	6	16	32	48	***
Special Pathology 254	1	2	3	8	16	24	***
Medical Pharmacology 263	4	6	10	32	48	80	***
Obstetrics 291	2	0	2	16	0	16	***
History of Medicine 275	1	0	1	8	0	8	0
Physical Diagnosis 271	1	2	3	8	16	24	***
Introductory Medicine 272	2	0	2	16	0	16	***
Surgery, Principles of 281	2	0	2	16	0	16	***
Second Year — Second Semester, Second Half							
Special Pathology 252	2	2	4	16	16	32	2
Clinical Pathology 254	3	7	10	24	56	80	3
Medical Pharmacology 263	3	3	6	24	24	48	4
Clinical Anesthesiology 264	1	0	1	8	0	8	0
Obstetrics 291	2	0	2	16	0	16	2
Physical Diagnosis 271	2	2	4	16	16	32	3
Introductory Medicine 272	2	2	4	16	16	32	3
Surgery, Principles of 281	2	2	4	16	16	32	2

*Course continues throughout the year.
**Course completed at mid-semester.
***Course continues throughout the semester.

Gross Anatomy and Neuro-anatomy

Professor CHANDLER; Assistant Professor WILLIAMS; Instructor COMBS

201.[1] **Gross Anatomy.** I. 6 Hrs. Lecture, 2 hours per week; laboratory, 8 hours.

202.[1] **Gross Anatomy.** II. 4 Hrs. Continuation of Anatomy 201. Lecture, 2 hours per week; laboratory, 6 hours.

203.[1] **Neuro-anatomy.** II. 4 Hrs. Lecture, 2 hours per week; laboratory, 6 hours.

204.[2] **Applied Anatomy.** II. 2 Hrs. Lecture, 2 hours per week; laboratory, 4 hours during first half of semester.

206. **Anatomy of the Sympathetic Nervous System.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

207. **Applied Anatomy of the Pelvis and Perineum.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

301. **Advanced Anatomy.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

Histology and Embryology

Professor DODDS; Assistant Professor WILLIAMS

211.[1] **Histology.** I. 6 Hrs. Histological structure and elementary embryology of tissues and organs. Lecture, 3 hours per week; laboratory, 9 hours.

212.[1] **Human Embryology.** II. 2 Hrs. Comprehensive survey of human development in relation to gross and microscopic structure. Lecture, 2 hours per week.

216. **The Histology and Development of the Skeletal System.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students. Laboratory work and study of current literature.

217. **Advanced Embryology.** I or II. 2-5 Hrs. Topics to be chosen to meet special needs of students. Hours to be arranged. Open to properly qualified students.

311. **Research in Microscopy or Developmental Anatomy.** I or II or Yr. 2-5 Hrs. Hours to be arranged. Open to properly qualified students.

Bacteriology and Public Hygiene

Associate Professor SLACK; Instructor LUDWIG

220. **Pathogenic Bacteriology.** I. 5 Hrs. Required of students in pharmacy and medical technology. Open to other qualified students. Lecture, 2 hours per week; laboratory, 8 hours.

221.[1] **Medical Bacteriology.** II. 6 Hrs. Lecture, 3 hours per week; laboratory, 9 hours.

222.[2] **Public Hygiene.** I. 2 Hrs. Lecture, 2 hours per week.

226. **Advanced Bacteriology.** I or II. 2-5 Hrs. Hours to be arranged. Open to graduates and advanced students.

321. **Research in Bacteriology.** I or II. 2-5 Hrs. PR: Bacteriology 221 or equivalent.

Biochemistry

Professor MACLACHLAN; Assistants GILMORE and MATTHEWS

139 or 239. **General Biochemistry.** II. 4 Hrs. Fundamental biochemistry of plants and animals with special reference to man. PR: Inorganic and organic chemistry. Quantitative analysis desirable. Lecture, 3 hours per week; laboratory, 5 hours. Graduate students required to do one hour additional work per week for 4 hours' credit.

231.[1] **Biochemistry.** I. 7 Hrs. Lecture, 4 hours per week; laboratory, 9 hours.

236. **Advanced Biochemistry.** I or II. 2-5 Hrs. With special emphasis on biochemical methods. Hours to be arranged. Open to properly qualified students.

331. **Research in Biochemistry.** I or II or Yr. 2-5 Hrs. Open to properly qualified students.

Physiology

Professor VAN LIERE; Associate Professor NORTHUP; Assistant Professor STICKNEY

141. **Elementary Physiology.** II. 4 Hrs. For students in Pharmacy and Medical Technology. Lecture, 3hours per week; laboratory, 3 hours.

242.[1] **Physiology.** II. 3 Hrs. Physiology of muscle and nervous system. Lecture, 2 hours per week; laboratory, 3 hours.

243.[2] **Physiology.** I. 7 Hrs. Physiology of circulation, respiration, digestion, metabolism, secretion, endocrines, and special senses. Lecture, 5 hours per week; laboratory, 6 hours.

246. **Seminar in Physiology.** Yr. No credit.

247. **Advanced Physiology of Circulation and Respiration.** Yr. 2-5 Hrs. Hours to be arranged.

248. **Physiology of Gastro-intestinal System.** II. 2-5 Hrs. Hours to be arranged.

249. **Nervous Physiology and Special Senses.** Yr. 2-5 Hrs. Hours to be arranged.

341. **Physiology.** I or II. 2-5 Hrs. Research in Physiology leading to the master of science degree.

Pathology

Professor HOBBS; Assistant Professor STRAUB

151. **Clinical Laboratory Diagnostic Methods.** II. 4 Hrs. Study of blood, exudates, transudates, gastric contents, urine, etc. Lecture, 2 hours per week; laboratory, 6 hours. Required of students in Medical Technology.

251.[2] **General and Tumor Pathology.** I. 7 Hrs. Includes both gross and microscopic studies with demonstrations. Lecture, 4 hours per week; laboratory, 10 hours.

252.[2] **Special Pathology.** II. 2 Hrs. A study of special diseases with gross and microscopic specimens from selected autopsies. Lecture, 1 hour, laboratory, 2 hours per week during first half of semester; lecture, 2 hours per week; laboratory, 2 hours during second half of semester.

254.[2] **Clinical Pathology.** II. 3 Hrs. A laboratory course in blood, gastric contents, urine, etc., and their pathological and clinical significance. Lecture, 2 hours per week; laboratory, 4 hours during first half of semester; lecture, 3 hours per week; laboratory, 7 hours during second half of semester.

256. **Advanced Pathology.** I or II. 3 Hrs. Microscopic and gross specimens from selected autopsies. PR: Pathology 251.

351. **Experimental Pathology.** I or II. 2-5 Hrs. Hours to be arranged. Open to properly qualified students

Pharmacology

Professor MARSH; Lecturers TUCKER and HAYMAN

262[2] **Pharmacodynamics.** I. 3 Hrs. Lecture, 3 hours per week.

263.[2] **Medical Pharmacology.** II. 4 Hrs. Lecture, 4 hours per week, laboratory, 6 hours, first half of semesteer; lecture, 3 hours per week, laboratory, 3 hours, second half of semester.

264.[2] **Clinical Anesthesiology.** II. No credit. Practical demonstrations of anesthesia to be arranged. 1 hour per week, second half of semester.

266. **Biochemorphology.** II. 2 Hrs. Lecture, 2 hours per week. Relation between chemical constitution and physiological action of medical agents. PR: Pharmacology 262, or Chemistry 238 or 277.

267. **Bioassy and Comparative Pharmacology.** I or II. 3 Hrs. Lecture and demonstrations, 2 horus per week; laboratory, 3 hours. Cellular pharmacodynamics and comparative mammalian pharmacology. PR: Pharmacology 262; or Chemistry 238 or 277 and Histology 211; or Pharmacy 110

268. **Advanced Pharmacology.** I or II. 2-5 Hrs. Hours to be arranged. Rational investigation of new drugs.

269. **Anesthesiology.** II. 3 Hrs. Lecture, 2 hours per week; laboratory, 3 hours. PR: Physiology 242.

361. **Research in Pharmacology.** I or II. 2-5 Hrs. Hours to be arranged. PR: Graduate status in physiology, chemistry, or agriculture.

Medicine

Associate Professors LAWLESS and SLEETH; Assistant Professors MAXWELL, WHITTLESEY, SALKIN; Instructors JOHNSON, STARKEY, TEITELBAUM, and GADZIKOWSKI

271.[2] **Physical Diagnosis.** Yr. 3 Hrs. Lecture, 1 hour per week during first semester; lecture, 1 hour per week, laboratory, 2 hours during first half of second semester; lecture, 2 hours per week, practical work with patients, 2 hours during second half of second semester. Hospital clerkship at Hopemont Sanitarium, 1 week.

272.[2] **Introductory Medicine.** Yr. 3 Hrs. Medical clinic—demonstration of clinical cases, 2 hours per week during first semester; lecture, 1 hour per week during first half of second semester; lecture, 2 hours, demonstration of clinical cases, 2 hours per week during second half of second semester. Hospital clerkship at Hopemont Sanitarium, 1 week.

273.[2] **Psychobiology.** I. 1 Hr. Introduction to the study of human personality, normal and abnormal. Lecture, 1 hour per week.

274.[2] **Biostatistics.** I. 1 Hr. Planned to aid in the understanding of the statistical methods commonly used in medical and biological work, and in the evaluation of experimental data in these fields. Lecture, 1 hour per week.

History of Medicine

Professor CHANDLER

275.[2] **History of Medicine.** II. No credit. A brief history of the development of the science and art of medicine. Lecture, 1 hour per week during first half of semester.

Introductory Surgery

Associate Professor PRIDE

281.[2] **Principles of Surgery.** II. 2 Hrs. Lecture, 2 hours per week during first half of semester; lecture, 2 hours per week during second half of semester, demonstrations of clinical cases and operative technique, 2 hours.

Obstetrics

Professor VAN LIERE

291.[2] **Obstetrics.** I. 2 Hrs. An introductory course in obstetrics. Lecture, 2 hours per week.

The Divison of Military Science and Tactics

Professor LUKERT; Assistant Professors COOPER, HAWKINS, BLANEY, NORRIE, MARSHALL, KOHNSTAMM, EVANS, and WHITE

Elementary — First Year

1. Military Science 1. 2 Hrs. 3 hours per week.
   Military organization; hygiene and first aid; leadership, drill, and exercise of command; individual weapons and marksmanship; maps and aerial photographs; National Defense Act and ROTC.

2. Military Science 2. 2 Hrs. 3 hours per week.
   Continuation of subjects taught during first semester.

Elementary — Second Year

3. Military Science 3. 2 Hrs. 3 hours per week.
   Leadership, drill, and exercise of command; physical-development methods; maps and aerial photographs; military administration; evolution of warfare; military law and boards.

4. Military Science 4. 2 Hrs. 3 hours per week.
   Continuation of subjects taught during first semester.

Advanced — First Year

1. Military Science 105. Infantry, Engineers, Signal, and Air. 3 Hrs. 5 hours per week.
   Military leadership, psychology, and personnel management; leadership, drill, and exercise of command; geographical foundations of national power; military law and boards.

2. Military Science 106. Infantry, Engineers, Signal and Air. 3 Hrs. 5 hours per week.
   Tactics and technique of the elected arm or branch of service.

3. Military Science 106 (Summer Camp). Infantry, Engineers, Signal, and Air. No additional credit.

Advanced — Second Year

4. Military Science 107. Infantry, Engineers, Signal, and Air. 3 Hrs. 5 hours per week.
   Command and staff; military teaching methods; psychological warfare, military problems of the United States; leadership, drill, and exercise of command; military mobilization and demobilization; combat intelligence.

5. Military Science 108. Infantry, Engineers, Signal and Air. 3 Hrs. 5 hours per week.
   Tactics and technique of elected arm or branch of service.
   Air Corps: administration and military management; and aircraft maintenance and engineering.

The School of Music

GENERAL INFORMATION

The School of Music of West Virginia University is an Associate Member of the National Association of Schools of Music. It was established in 1897 and is situated in two buildings. One contains two studios, three studio-classrooms, and six practice rooms; the other contains the office, two studios, ten practice rooms, one classroom, and the locker-room.

The equipment consists of 20 upright pianos and 13 grand pianos, an electric organ, a two-manual practice organ, and a three-manual pipe organ, modernized to conform to specifications of the American Guild of Organists. The pipe organ is situated in Reynolds Hall, and the others in the School of Music.

STUDENT CONCERTS

Students giving satisfactory performances appear in recital. The object is to afford opportunity for the students to apply in public the proficiency that has been developed in the studio.

All music students are required to attend the regular student recitals, to take part in them whenever so assigned, and to attend all concerts given under the auspices of the University. They are expected to identify themselves with the various organizations of the school and are required to enter any to which they are assigned by the Director.

Students of the School of Music are not allowed to take part in public programs or to join musical organizations without the consent of their respective instructors and the Director of the school.

FACULTY COMMITTEES

SCHOLARSHIP: Messrs. CUTHBERT and WOOD and Miss HINKEL.
CONCERTS AND RECITALS: Messrs. CUTHBERT, BRIGGS, WOOD and MCGREGOR.

REQUIREMENTS FOR THE DEGREE

The School of Music offers a four-year curriculum in voice, violin, piano, pipe-organ, theory and composition, and public-school music, leading to the degree of Bachelor of Music (B. Mus.).

The Bachelor of Music degree is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and departmental requirements, and completes one of the following curricula in music (136 hours) with an average of one honor point per credit-hour:[1]

A. Piano, violin, pipe-organ, or voice
B. Theory and composition
C. Public-school music

[1]Honor points in excess of those earned for credit of 8 hours in Glee Club, Chorus, Orchestra, and Band will not be counted towards requirements for graduation.

Before graduation, all candidates for the degree Bachelor of Music must demonstrate the required proficiency in playing at sight piano accompaniments of moderate difficulty, and they must have performed in a minimum of four Student Recitals. In addition, all candidates for the degree Bachelor of Music in Public School Music must show proficiency in Voice and in one Band or Orchestral Instrument.

THE SUGGESTED CURRICULUM IN APPLIED MUSIC

Leading to the Degree of Bachelor of Music in

Piano, Violin, or Pipe Organ

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 1	4	M. 2	4
Glee, Cho., Bnd., or Orch.	1	Glee., Cho., Bnd., or Orch.	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
(W)	18	(W)	18
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 3	4	M. 4	4
M. 79	2	M. 80	2
Glee, Cho, Bnd., or Orch.	1	Glee, Cho, Bnd., or Orch.	1
English	3	English	3
P. ed. (W)	1	P. ed. (W)	1
(W)	17	(W)	17
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	18	(M)	18

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 107	2	M. 108	2
M. 109	2	M. 110	2
M. 153	1	M. 154	1
Music elec.	2	Music elec.	2
Glee, Cho., Bnd., or Orch.	1	Glee, Cho., Bnd., or Orch.	1
Acad. elec.	3	Acad. elec.	3
	17		17

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied Major	4	Applied Major	4
Applied Minor	2	Applied Minor	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
M. 155	1	M. 156	1
M. 182 or 183	2	M. 199	2
M. 240	2	M. 241	2
M. 281	2		15
	17		

[1]See footnote on next page.
[2]See footnote on next page.

THE SUGGESTED CURRICULUM IN APPLIED MUSIC

Leading to the Degree of Bachelor of Music in

Voice

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 1	4	M. 2	4
Glee or Cho.	1	Glee or Cho.	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
(W)	18	(W)	18
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 3	4	M. 4	4
M. 79	2	M. 80	2
Glee or Cho.	1	Glee or Cho.	1
P. ed.[2] (W)	1	P. ed.[2] (W)	1
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
(W)	17	(W)	17
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	18	(M)	18

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 107	2	M. 108	2
M. 109	2	M. 110	2
M. 180	2	English	3
English	3	Acad. elec.	3
Acad. elec.	3	Glee or Cho.	1
Glee or Cho.	1		—
	19		17

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Voice	4	Voice	4
Piano	2	Piano	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
M. 182	2	M. 183	2
M. 240	2	M. 241	2
Glee or Cho.	1	M. 199	2
	—	Glee or Cho.	1
	15		17

[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work and all who have credit for 4 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular exemption card is filed in the Registrar's office.

[2]Two hours of physical eduucation for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

THE SUGGESTED CURRICULUM IN THEORY AND COMPOSITION

Leading to the Degree of Bachelor of Music in

Theory and Composition*

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 1	4	M. 2	4
M. 79	2	M. 80	2
Glee or Cho.	1	Glee or Cho.	1
Orchestra	1	Orchestra	1
English 1	3	English 2	3
P. ed.[2]	1	P. ed.[2]	1
(W)	16	(W)	16
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	18	(M)	18

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 3	4	M. 4	4
M. 107	2	M. 108	2
Glee or Cho.	1	Glee or Cho.	1
Orchestra	1	Orchestra	1
English	3	English	3
Fr., Ger., or Ital.	3	Fr., Ger., or Ital.	3
P. ed. (W)[2]	1	P. ed. (W)[2]	1
(W)	19	(W)	19
Mil. sc. (men)[1]	2	Mil. sc. (men)[1]	2
(M)	20	(M)	20

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 109	2	M. 110	2
M. 113	2	M. 114	2
M. 117	2	M. 118	2
Glee or Cho. or Band or M. 153	1	Glee or Cho. or Band or M. 154	1
Orchestra	1	Orchestra	1
Acad. elec.	3	Fr., Ger., or Ital.	3
Fr., Ger., or Ital.	3	Inst. Class	1
Inst. Class	1		16
	19		

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 111	3	M. 112	3
M. 155	1	M. 156	1
M. 180	2	M. 198	2
M. 182	2	M. 183	2
M. 186	2	M. 187	2
M. 240	2	M. 241	2
Inst. Class	1	M. 281	2
	17		18

*In order to be approved for candidacy in this field at the beginning of the Junior year, a student working towards the degree of Bachelor of Music in Theory and Composition must have maintained at least an average of B in all Theory courses required in the Freshman and Sophomore years, and he must have attained and demonstrated the required proficiency in Piano.

[1]Military science is required of all male students except those who at the time of matriculation are 23 years of age or have completed no less than 58 hours of work, and all who have credit for 4 hours of military science or 1 unit of entrance credit in military academy. Students must register for military science upon their entrance into the University and continue in the course until the full requirement has been met or until a regular exemption card is filed in the Registrar's office.

[2]Two hours of physical education for men, to be taken during the first year of residence, and four hours of physical education for women, to be taken during the first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

THE SUGGESTED CURRICULUM IN PUBLIC-SCHOOL MUSIC

Leading to the Degree of Bachelor of Music in

Public-School Music*

FRESHMAN

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 1	4	M. 2	4
M. 79	2	M. 80	2
Glee, Orch., Bnd., or Cho.	1	Glee, Orch., Bnd., or Cho.	1
English	3	English	3
Sc. or math.	3	Sc. or math.	3
P. ed.[2]	1	P. ed.[2]	1
(W)	18	(W)	18
Mil. sc.[1]	2	Mil. sc.[1]	2
(M)	20	(M)	20

SOPHOMORE

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 3	4	M. 4	4
Glee, Orch., Bnd., or Cho.	1	Glee, Orch., Bnd., or Cho.	1
English	3	P. Sp.	3
Soc. studies	3	Soc. studies	3
Psychol. 1	3	P. ed.[2] (W)	1
P. ed[2] (W)	1	2nd Field	3
		Instr. Class	1
(W)	19	(W)	20
Mil. sc.[1]	2	Mil. sc.[1]	2
(M)	20	(M)	21

JUNIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 107	2	M. 108	2
Instr. Class	1	M. 182 or 183	2
Glee, Orch., Band. or Cho.	1	Instr. Class	1
Soc. studies	3	Glee, Orch., Band, or Cho.	1
2nd Field	2	Soc. studies	3
Ed. 106	3	2nd Field	5
Ed. 109	2	Ed. elec.	2
	18		20

SENIOR

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Applied	4	Applied	4
M. 117	2	M. 118	2
M. 185	3	Instr. Class	1
Instr. Class	1	Glee, Orch., Band, or Cho.	1
Glee, Orch., Band, or Cho.	1	M. 241	2
M. 240	2	Ed. 120	2
2nd Field	3	Ed. 169	2
H. Ed.	2	Ed. 214	2
Ed. elec.	2	Ed. 224	3
	20		19

All students majoring in Public-school Music must meet the general academic and professional requirements for all high-school teachers as prescribed in State Bulletin for Certification of Teachers, in addition to the School of Music degree requirements.

Subject to the approval of the Director of the School of Music, Public-school Music may be chosen as a single teaching field, with training required in both Secondary and Elementary School Music.

Candidates for certification in music may be recommended for certification in one field with an upper limit of 68 hours in music and with no fewer than 48 hours distributed in subjects other than Education, approved by the Director of the School of Music.

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*See W. V. U. Bulletin on Teacher Certification for Second-field Requirements.

[1]Military science will not be accepted as physical education. Women may meet the four-hour physical education activity requirement by taking group 1 (Swimming), 2 (Dancing) 3 (Individual Sport), and 4 (Group Sport); men may meet it by taking P. E. 1, 2, and 180.

[2]Two hours of physical education for men, to be taken during the first year of first and second years in residence, are required for graduation of students presenting fewer than 58 semester hours, unless previous credit has been allowed.

THE COURSES OF INSTRUCTION

Theory of Music and General Courses*

Professor CUTHBERT; Associate Professors HINKEL, BRIGGS, and WOOD; Assistant Professors BROWN, ENGLISH, HOLLAND, and MCGREGOR; Instructors RHODES and COPLIN; Instructors Emeritus MOORE and SNEE

1. **Theory.** I, II. 4 Hrs. PR: M. 72 or its equivalent. Staff

2. **Theory.** I, II. 4 Hrs. PR: Music 1. Staff

3. **Theory.** I, II. 4 Hrs. PR: Music 1 and 2. Staff

4. **Theory.** I, II. 4 Hrs. PR: Music 1, 2, and 3. Staff

Music 1, 2, 3, and 4 constitute a composite course in musical theory, including fundamentals, sight reading, ear training and dictation, elementary and advanced harmony, keyboard harmony, and an approach to elementary counterpoint.

72. **Introduction to Music.** I, II. 0 or 2 Hrs. Fundamentals of reading, rhythm, and theory; terminology. This course or its equivalent is required for all entering freshman Music majors, without credit. Mr. McGregor

77. **Enjoyment of Music.** I, II. 1 Hr. A non-technical course dealing with the elements of music-rhythm, timbre, form, harmony, melody, etc. Not open to music majors. Mr. Wood

79. **Survey of Music Literature and History.** I. 2 Hrs. General survey of musical literature and history. Miss Hinkel

80. **Survey of Music Literature and History.** II. 2 Hrs. Continuation of Music 79. Miss Hinkel

107. **Form and Analysis.** I. 2 Hrs. A detailed study of the structure of music. Mr. Briggs

108. **Form and Analysis.** II. 2 Hrs. Continuation of Music 107. Mr. Briggs

109. **Introductory Counterpoint.** I. 2 Hrs. Strict two-part counterpoint in the five species. Mr. English

110. **Counterpoint.** II. 2 Hrs. Strict and free counterpoint in three and four parts. Mr. English

111. **Double Counterpoint and Canon.** I. 3 Hrs. Double counterpoint at the octave, tenth and twelfth; strict and free imitation. Staff

112. **Fugue.** II. 3 Hrs. Analysis and writing of classical fugue. PR: Music 111. Staff

113. **Introductory Composition.** I. 2 Hrs. PR: M. 4. Original creative writing in the smaller forms. Mr. English

114. **Composition.** II. 2 Hrs. PR: M. 113. Continuation of original writing. Mr. English

115. **Sight Playing.** I, II. 1 Hr. Study of the factors essential to the sight playing of varied piano compositions. Staff

116. **Sight Playing.** I, II. 1 Hr. Continuation of Music 115. Staff

*No additional fees charged for theory-of-music and general courses.

117. **Orchestration.** I. 2 Hrs. PR: M. 4. Arrangements for string orchestra. Projects taken from choral and piano compositions. Elements of wood winds and brass. Mr. Wood

118. **Orchestration.** II. 2 Hrs. PR: M. 117. Arrangements for wood wind and brass separately and together with strings. Transcriptions of piano compositions. Mr. Wood

180. **Survey of Operatic Music.** I, II. 2 Hrs. Miss Hinkel

182. **Choral Conducting.** I, II. 2 Hrs. The conductor's art in the choral field, including practical experience in conducting choral groups. Miss Hinkel

183. **Instrumental Conducting and Score Reading.** I, II. 2 Hrs. The conductor's art in the instrumental field, including score reading and practical experience in conducting instrumental groups. Mr. Coplin

185. **Public-school Music and Adolescent Voice.** I, II. 3 Hrs. Essentials of public-school music, including the study of changing voice. Miss Hinkel

186. **Composition.** I. 2 Hrs. Original writing of vocal music. PR: M. 113 and M. 114. Mr. English

187. **Composition.** II. 2 Hrs. Original writing of instrumental music. PR: M. 113 and M. 114. Mr. English

198. **Original major work in composition.** I, II. 2 Hrs. Required for degree in Theory and Composition. Staff

Men's Glee Club. I, II. 1 Hr. each semester. Mr. Cuthbert

Women's Glee Club. I, II. 1 Hr. each semester. Miss Hinkel

University and Community Orchestra. I, II. 1 Hr. each semester. Mr. Wood

University and Community Mixed Chorus. I, II. 1 Hr. each semester. Mr. Cuthbert

Band. I, II. 1 Hr. each semester. Open to male students who have satisfied the basic military requirement and have been approved by the director of the Band. Mr. McGregor

200s. **Band, Orchestra, and Chorus Clinic.** 2 Hrs. Special problems of organization and development, including literature, rehearsal technique, drilling, tuning, and motivation of student practice. Lecture and discussion groups. This clinic will function with laboratory groups of high-school students. Staff

240. **History of Music.** I. 2 Hrs. Survey of the progress of music history from medieval times to the end of the classical-school period. Mr. Wood

241. **History of Music.** II. 2 Hrs. Continuation of Music 240, including the romantic and modern schools. Mr. Wood

281. **Survey of Symphonic Music.** I, II. 2 Hrs. Miss Hinkel

Voice

Professor Cuthbert; Assistant Professors McGregor and Holland; Instructor ————

The material used is selected according to individual needs. Vocalises; English, Italian, French, and German song literature; arias from standard operas and oratorios. Before graduation each student is required to give a public recital of selections chosen from the standard literature for the voice.

199. **Graduation Recital.** I, II. 2 Hrs. (Required for degree).

Piano

Associate Professor BRIGGS; Assistant Professor ENGLISH; Instructors RHODES and ————

The material used is selected according to individual needs. Technical studies, etudes, and standard compositions of Bach, Mozart, Haydn, Beethoven, Schubert, Schumann, Chopin, Liszt, Brahms, Debussy, Dohnanyi, Scriabine, etc. Before graduation each student is required to give a public recital.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree).

Violin

Associate Professor WOOD

The material used is selected according to individual needs. Technical studies by Schradieck, Sevcik, etc. Solos and concertos by Wieniawski, Vieuxtemps, Sarasate, Viotti, Spohr, Mozart, etc. Before graduation each student is required to give a public recital of compositions chosen from the standard literature for the violin, including concertos of Bruch, Mendelssohn, Conus, Paganini, etc.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Pipe Organ

Assistant Professor ENGLISH

The material used is selected according to individual needs. Technique; standard works of Bach, Mendelssohn, Guilmant, Hollins, etc. Before graduation each student is required to give a public recital of compositions chosen from the standard literature for the pipe organ.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Band and Orchestra Instruments

Associate Professor WOOD; Assistant Professor MCGREGOR; Instructor COPLIN

Individual lessons; standard methods; materials selected to meet individual needs.

199. Graduation Recital. I, II. 2 Hrs. (Required for degree.)

Ensemble

Professor CUTHBERT and Associate Professor WOOD

153, 154. Accompanying. I and II. 1 Hr. per semester. The course furnishes opportunity to acquire the art of accompanying songs and violin and cello solos.

155, 156. Chamber Music. I and II. 1 Hr. per semester. The study of sonatas, trios, and string quartettes of the most famous composers. Open to violinists, cellists, pianists, and viola players.

Instrument Classes[1]

Associate Professor WOOD; Assistant Professor MCGREGOR; Instructor COPLIN

191. Trombone. I, II. 1 Hr. Study of the trombone. Tone production, simple

exercises and scales, easy pieces, positions of the slide trombone, and their relationship. Literature of brass instruments.

192. Cornet. I, II. 1 Hr. Study of the cornet. Tone production, simple exercises and scales, easy pieces, fingering of cornet. Literature of brass instruments.

193. Clarinet. I, II. 1 Hr. Study of the clarinet. Boehm system. Tone production, simple scales, and exercises.

194. Violin. I, II. 1 Hr. Study of the violin. Scales, simple pieces, exercises, positions, tuning, etc.

195. Flute. I, II. 1 Hr. Study of the flute. Boehm system. Tone production, simple scales, and exercises.

196. Viola and Cello. I, II. 1 Hr. Study of the viola and cello. Scales, simple pieces, exercises, positions, tuning, etc.

197. Percussion. I, II. 1 Hr. Study of percussion instruments.

Graduate Courses

Candidates for the Master's degree in Music are required to have completed the prescribed four-year curriculum of undergraduate study in Music, or to have completed such a curriculum, or its equivalent, at some institution of recognized standing.

General qualifying examinations are required of all candidates for the degree of Master of Music.

Each candidate for a degree must select his major subject in that department of Music in which his degree is to be taken, and submit a thesis showing marked attainment in some phase of this subject.

All Music courses leading toward the Master's degree in Music must be chosen from the 300 series in Music. However, elective courses may be chosen from the 200 or 300 series.

The requirements for the degree Master of Music in Public-school Music constitute 20 hours in Music and 10 hours elective in Education or Arts and Science subjects. The Music courses include 301(2), 302(2), 305(3), 306(3), 309(3), 313(3), and 399(4). Credit for work in Band and Orchestra Instruments will be accepted towards the Advanced Applied Music requirements.

The requirements for the degree Master of Music in Applied Music constitute 20 hours in Music and 10 hours elective in Arts and Science subjects. The Music courses include 301 (4), 302 (4), 307 (3) or 313 (3), 308 (3), 309 (3), and 399 (3). Credit in Advanced Applied Music must be earned in Piano, Voice, Violin, or Pipe Organ.

301. Advanced Applied Music. I. 2 or 4 Hrs. Continuation of study in Applied Music (voice, piano, violin, pipe organ, band and orchestra instruments), including public performance of advanced compositions. Staff

302. Advanced Applied Music. II. 2 or 4 Hrs. Continuation of Music 301. Staff

305. Advanced Public-school Music. I. 3 Hrs. Survey and critical study of the vocal and instrumental repertoire of Public-school Music, with discussions of essentials in its performance. Miss Hinkel

[1]Students may use their own instruments, or instruments may be rented for a fee of $2.50 per semester.

306. **Advanced Public-school Music.** II. 3 Hrs. Continuation of Music 305. Comprehensive study, evaluation, and interpretation of musical masterpieces suitable for use in Public-school Music, including all of the principal types. Miss Hinkel

307. **Advanced Composition.** I, II. 3 Hrs. Composition in larger forms. Mr. English

308. **Music Literature.** I, II. 3 Hrs. Survey and critical study of music literature in the major field of Applied Music. Staff

309. **Advanced Conducting.** I. 3 Hrs. Study and practice in the conducting of advanced choral and instrumental works, including advanced score-reading. Mr. Wood

313. **Advanced Orchestration.** II. 3 Hrs A study in advanced technique of orchestral arranging, including arranging of Bach's and Beethoven's solo instrumental works. Mr. Wood

399. **Thesis.** I, II. 2 to 4 Hrs. Including research in the Major or related field of music. Staff

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The College of Pharmacy

ORGANIZATION AND OBJECTIVES

In response to the request of the West Virginia State Pharmaceutical Association, a forward-looking group of pharmacists practicing in the state who recognized the necessity for more thoroughly educated and better-trained pharmacists, the Board of Regents in 1914 established a Department of Pharmacy in the School of Medicine. The first course offered was a two-year course leading to the degree of Graduate in Pharmacy (Ph. G.).

In 1917 additional courses of three and four years, leading to the degrees of Pharmaceutical Chemist (Ph. C.) and Bachelor of Science in Pharmacy (B. S. Phar.), were established. The course leading to the degree of Graduate in Pharmacy was discontinued in 1924, and the course leading to the degree of Pharmaceutical Chemist was discontinued in 1932. Since 1932, a minimum of four years of study has been required.

The College of Pharmacy was established as a separate division of the University, by order of the Board of Governors, effective July 1, 1936.

The chief purpose of the College of Pharmacy is to provide a systematic instruction in pharmacy, its allied sciences, and such other subjects as are deemed to be essential in the education of a pharmacist, that he may meet the present and future demands of the profession in an able and intelligent manner. Its chief aim is to prepare its students for the intelligent practice of dispensing pharmacy, but it offers the facilities and instruction necessary for the practice of other branches of the profession.

Graduates of the College of Pharmacy are eligible for examination to practice pharmacy in any state, but graduates of this College who successfully pass the West Virginia State Board of Pharmacy examination are privileged to reciprocate with forty-five other states and with the District of

Columbia, Alaska, and Porto Rico, without further examination, provided they possessed the experience requirement of these states before taking the examination.

REQUIREMENTS FOR THE DEGREE

The degree of Bachelor of Science in Pharmacy (B. S. Phar.) is conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and completes the basic two-year course, together with one of the following curricula providing for specialized training during the third and fourth years:

A. Retail Pharmacy (142 hours)

B. Industrial Pharmacy (145 hours)

The curriculum for the first two years is the same for all students. At the beginning of the third year the student is expected to select a field of specialization and pursue for the remaining two years the courses outlined in that group.

Students who fail to complete the requirements for graduation within seven years from their first registration in the College shall satisfy the requirements in effect at the time they apply for graduation.

Substitutions. A student who desires to substitute another course in place of any course prescribed in his curriculum must obtain permission for such substitution from the Committee on Scholarship.

BASIC COURSES REQUIRED FOR THE DEGREE*

First Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Botany 1	4	Botany 2	4
Chem. 1	4	Chem. 2	4
Military 1	2	English 2	3
English 1	3	Military 2	2
Pharm. 1	3	Pharm. 3	2
Pharm. 2	2	Pharm. 10	3
Phys. Ed. 1	1	Phys. Ed. 2	1
	19		19

Second Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 5	4	Chem. 6	4
Econ. 1	3	Econ. 2	3
Military 3	2	Military 4	2
Pharm. 5	3	Pharm. 6	4
Pharm. 4	2	Pharm. 7	2
Pharm. 11	3	Pharm. 12	3
Pharm. 9	2		
	19		18

Retail Pharmacy‡

Third Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 233	5	Chem. 238	4
Physics 1	3	Pharm. 8	2
Physics 3	1	Pharm. 107	2
Pharm. 103	2	Pharm. 114	2
Pharm. 106	2	Physics 2	3
Pharm. 101	1	Physics 4	1
Pharm. 102	1	Physiol. 141	4
	15		18

Fourth Year

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Bacter. 220	5	Pharm. 109	2
Pharm. 108	3	Pharm. 113	5
Pharm. 110	3	Pharm. 118	1
Pharm. 201	3	Pharm. 202	2
Pharm. 203	2		
Pharm. 205	2		
	18		10

Industrial Pharmacy†

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 163	3	Chem. 238	4	Bacter. 220	5	Biochem. 239	4
Chem. 233	5	Pharm. 8	2	Pharm. 108	3	Pharm. 109	2
Pharm. 103	2	Pharm. 104	2	Pharm. 110	3	Pharm. 113	5
Pharm. 106	2	Pharm. 107	2	Pharm. 201	3	Pharm. 118	1
Pharm. 205	2	Physics 2	3	Pharm. 203	2	Pharm. 202	2
Physics 1	3	Physics 4	1				
Physics 3	1	Physiol. 141	4				
	18		18		16		14

COMBINED PHARMACY AND MEDICAL TECHNOLOGY

Leading to the Degree of Bachelor of Science in Pharmacy in the College of Pharmacy and to the Degree of Bachelor of Science (Medical Technology) in the College of Arts and Sciences and in the School of Medicine.

The Bachelor of Science in Pharmacy degree in the College of Pharmacy and the Bachelor of Science (Medical Technology) degree in the College of Arts and Sciences and in the School of Medicine are conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and the first two years of the basic two-year course outlined on page 287, and the three-year curriculum outlined below. The degree of Bachelor of Science in Pharmacy to be awarded upon completion of the first four years of the curriculum, and the degree of Bachelor of Science (Medical Technology) to be awarded upon completion of the curriculum of the fifth year.

Students completing the basic two-year curriculum and desiring to pursue the following curriculum must make application and secure the approval of the appropriate committee of the School of Medicine.

Third Year

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Zoology 231	5	Chemistry 238	4
Chemistry 233	5	Parasitology 120	4
Pharmacy 103	2	Pharmacy 8	2
Pharmacy 106	2	Pharmacy 107	2
Physics 1	3	Physics 2	3
Physics 3	1	Physics 4	1
		Physiology 141	4
	18		20

*Upon entering, those who plan to follow the Pharmacy—Medical course or the Pharmacy—Medical Technician course should elect zoology instead of botany during the first year. Psychology, 3 hours; a modern foreign language, 12 hours, and comparative anatomy are required for the Pharmacy—Medical course.

‡Additional approved elective courses to make a total of 142 hours are required for graduation.

†Additional approved elective courses to make a total of 145 hours are required for graduation.

Fourth Year

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
Pharmacy 108	3	Biochemistry 239	4
Pharmacy 110	3	Pharmacy 109	2
Pharmacy 201	3	Pharmacy 113	5
Pharmacy 203	2	Pharmacy 118	1
Pharmacy 205	2	Pharmacy 202	2
Bacteriology 220	5	Pathology 101	4
	18		18

Fifth Year*

First Sem.	*Hrs.*	*Second Sem.*	*Hrs.*
M.T. Urine analysis	5	Hospital Assignment	5
M.T. Normal hematology	4	M.T. Applied bacteriology	4
M.T. Microtechnique	3	M.T. Special hematology	3
M.T. Applied serology	4	M.T. Metabolimetry	3
M.T. Applied parasitology	1	M.T. Electrocardiography	2
	17		17

COMBINED PHARMACY AND MEDICAL COURSES

Leading to the Degree of Bachelor of Science in Pharmacy in the College of Pharmacy and to the Degree of Bachelor of Science in the College of Arts and Sciences and in the School of Medicine

The Bachelor of Science degree in the College of Arts and Sciences and in the School of Medicine and the Bachelor of Science in Pharmacy degree in the College of Pharmacy are conferred upon any student who complies with the general regulations of the University concerning degrees, satisfies all entrance and college requirements, and the first year of the basic two-year course outlined on page 287, and the four-year curriculum outlined below, the last two years of which are taken in the School of Medicine.

Second Year				Third Year			
First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Sec. Sem.*	*Hrs.*
Chem. 5	4	Chem. 6	4	Chem. 163	3	Chem. 36	6
Fr. or Ger.	3	Fr. or Ger.	3	Fr. or Ger.	3	Fr. or Ger.	3
Military 3	2	Military 4	2	Pharm. 106	2	Pharm. 107	2
Pharm. 4	2	Pharm. 6	4	Physics 1	3	Psychol. 101	3
Pharm. 5	3	Pharm. 7	2	Physics 3	1	Physics 2	3
Pharm. 9	2	Pharm. 12	3	Pharm. 108	3	Physics 4	1
Pharm. 11	3			Zool. 231	5		
	19		18		20		18

The fourth and fifth years to be completed as per curriculum of the first two years in the School of Medicine. In view of the fact that the enrollment of the School of Medicine is limited, application for entrance must be made in accordance with the regulations of the School of Medicine.

*Owing to the nature of the work in the fifth year, there will probably be departures from the scheduled sequence of courses.

SUGGESTED ELECTIVE COURSES

First Semester

Subject	*Hrs.*
Biol. 1—Biology	4
Bot. 221—Plant Physiol.	4
Bus. Ad. 121—Elements of Marketing	3
Bus. Ad. 141—Business Law	3
Chem. 111—Synthetic Inorganic Chemistry	4
Chem. 214—Organic Qual. Anal.	3
Chem. 251—Industrial Inorganic Chemistry	3
Chem. 63 or 163—Physical Chemistry	3
Chem. 247—Stereochemistry	2
Chem. 141—Assigned Topics	1 to 5
Chem. 277—Synthetic Drugs	2
Chem. 343—Advanced Organic Chemistry	4
Econ. 111—Money and Banking	3
French 1—(When not offered for entrance credit)	3
Geol. 1—General Geology	3
Geol. 284—Mineralogy	4
German 1—(When not offered for entrance credit)	3
German 121—Scientific German	3
Journal. 113—Prin. of Advertising	3
Math. 3—College Algebra	4
Math. 4—Plane Trigonometry	2
Pharm. 115—Microscopy	2 to 3
Pharm. 116—Pharmaceutical Investigation	2 to 3
Physics 109—Problems in General Physics	2
Speech 11—Public Speaking	3
Sociol. 101—Intro. to Sociol.	3
Zool. 3—General Zoology	4

Second Semester

Subject	*Hrs.*
Zool. 231—Comparative Anat.	5
Bus. Ad. 127—Salesmanship	2
Bus. Ad. 122—Marketing of Manufactured Goods.	3
Chem. 252—Indust. Org. Chem.	3
Chem. 162—Colloidal Chem.	4
Chem. 274—History of Chem.	2
Chem. 142—Assigned Topics	1 to 5
Chem. 214—Organic Qual. Anal.	3
Chem. 277—Synthetic Drugs.	2
Ch. Eng. 102—Blow-Pipe Anal. and Assaying	2
Ch. Eng 201—Unit Organic Processes	3
Ch. Eng. 202—Water Exam. and Purification	2
Econ. 114—Corporation Finance	3
French 2—(When not offered for entrance credit)	3
Geol. 1—General Geology	3
German 2—(When not offered for entrance credit)	3
German 122—Scientific German	3
Math. 3—College Algebra	4
Math. 4—Plane Trigonometry	2
Pharm. 115—Microscopy	2 to 3
Pharm. 116—Pharmaceutical Investigations	2 to 3
Physics 110—Problems in General Physics	2
Physics 116—Photography	3
Speech 11—Public Speaking	3
Zool. 2—Vertebrate Zool.	4
Psychol. 1—Intro. to Psychol.	3
Psychol. 10—Applied Psychol.	3

THE COURSES OF INSTRUCTION

(For explanation of abbreviations see page 90)

Professors HAYMAN and BERGY; Associate Professor GEILER; Instructor WOJCIK

1. **Theoretical Pharmacy.** I. 3 Hrs. Descriptive and experimental lectures and recitations, embracing a study of the apparatus and technique necessary for the correct procedure in the manufacture of pharmaceutical preparations (86 hrs.). Lectures and recitations. Mr. Geiler

2. **Pharmaceutical Arithmetic and Stoichiometry.** I. 2 Hrs. Lectures and recitations (36 hours). Mr. Wojcik

3. **Pharmaceutical Arithmetic.** II. 2 Hrs. Continuation of Pharmacy 2. Lectures and recitations (36 hours). Mr. Wojcik

4. **Operative Pharmacy Lectures.** I. 2 Hrs. A systematic consideration of

the various official preparations for which the Pharmacopoeia and National Formulary give formulas and processes. Lectures and recitations (36 hours). Mr. Geiler

5. **Operative Pharmacy Laboratory.** I. 3 Hrs. This course is carried in conjunction with Pharmacy 4. The representative classes of preparations of the Pharmacopoeia and National Formulary are manufactured. (100 hours). Mr. Geiler

6. **The Art of Compounding.** II. 4 Hrs. The more difficult pharmaceuticals and miscellaneous preparations are considered in connection with the modern methods of compounding. Lectures and recitations (72 hours). Mr. Bergy

7. **Art of Compounding Laboratory.** II. 2 Hrs. A laboratory course in conjunction with Pharmacy 6. Laboratory (100 hours). PR: Pharmacy 4 and 5. Mr. Bergy

8. **Pharmaceutical Jurisprudence.** II. 2 Hrs. An intensive study of the Harrison Narcotic Law, the West Virginia Pharmacy Law, and other state and national laws pertaining to pharmacy. Lectures and recitations (36 hours). Mr. Hayman

9. **Pharmaceutical Latin.** I. 2 Hrs. Pronunciation, declension, English and Latin translations, comparisons, abbreviations and vocabularies of medicine and pharmacy. Lectures and recitations (36 hours). Mr. Wojcik

10. **Vegetable Histology.** II. 3 Hrs. The microscopical characteristics of starches, powdered vegetable drugs, and their adulterants. Lectures and recitations (18 hours), laboratory (100 hours). Mr. Geiler

11. **Pharmacognosy.** I. 3 Hrs. An intensive study of vegetable and animal drugs, their collection, preparation, constituents, and applicability. Lectures and recitations (54 hours). Mr. Hayman

12. **Pharmacognosy.** II. 3 Hrs. A continuation of Pharmacy 11. Lectures and recitations (54 hours). Mr. Hayman

101. **Commercial Design.** I. 1 Hr. Practical water-color lettering emphasizing arrangement and color harmony, for show cards and store windows. Laboratory (50 hours). Mr. Hayman

102. **Accounting.** I. 1 Hr. Laboratory (50 hours). Mr. Hayman

103. **Hygiene.** I. 2 Hrs. Lectures and recitations (36 hours). Mr. Bergy

104. **Qualitative Analysis of the Alkaloids and Synthetics.** II. 2 Hrs. Laboratory (100 hours). Mr. Bergy

106. **Pharmaceutical Chemistry.** I. 2 Hrs. Deals specifically with inorganic chemistry as applied to pharmacy. Lectures and recitations (36 hours). Mr. Bergy

107. **Pharmaceutical Chemistry.** II. 2 Hrs. A continuation of Pharmacy 106. Special attention to the chemistry and adaptability of germicides fungicides, paraciticides, rodenticides, etc. (36 hours). Mr. Bergy

108. **Prescriptions and Incompatibilities.** I. 3 Hrs. The prescription is studied relative to the interpretation of the chemical, pharmaceutical, and therapeutical incompatibilities, posology, art of dispensing, and Latin nomenclature. Lectures and recitations (54 hours). Mr. Hayman

109. **Prescription Practice.** II. 2 Hrs. A laboratory course embracing prescrip-

tion filling and dispensing. Laboratory (100 hours). Mr. Hayman

110. **Assay and Pharmaceutical Testing.** I. 3 Hrs. A critical study of U. S. P. & N. F. methods of assays. Lecture (18 hours), laboratory (100 hours). Mr. Geiler

113. **U. S. P. and N. F.** II. 5 Hrs. A comprehensive study of the United States Pharmacopoeia and the National Formulary, including review on related subjects. Recitations (90 hours). Mr. Hayman

114. **Commercial Pharmacy.** II. 2 Hrs. The establishment, management, and development of a modern pharmacy, with special emphasis on business economics, accounting, correspondence, salesmanship, and advertising. Lectures and recitations (36 hours). Mr. Geiler

115. **Advanced Microscopy.** I or II. 2 to 3 Hrs. A laboratory course concerned with the microscopy of vegetable foods and technical products, quantitative microscopic methods, and micrometry. Permission of instructor must be obtained before electing. Laboratory (100 to 150 hours). Mr. Hayman

116. **Pharmaceutical Investigation.** I or II. 2 or 3 Hrs. Original investigation in pharmacy or pharmaceutical chemistry. Laboratory and collateral reading. (100 to 150 hours). Mr. Hayman and Staff

117. **Dispensing.** I or II. 1 or 2 Hrs. A practical course in University Pharmacy under the supervision of a registered pharmacist in compounding, pricing, and filing prescriptions. Laboratory (50 to 100 hours).
Mr. Hayman and Staff

118. **New and Nonofficial Remedies.** II. 1 Hr. A critical study of the most recent pharmaceutical introductions as approved by the Council of Pharmacy of the American Medical Association. Lectures and recitations (18 hours). Mr. Bergy

120. **Cosmetics.** I. 1 or 2 Hrs. A laboratory course devoted to compounding a large number of preparations of this type, including perfumes (50 or 100 hours). Mr. Bergy

121. **Household Products.** II. 1 or 2 Hrs. Laboratory (100 hours). Mr. Bergy

201. **Pharmacology.** II. 3 Hrs. A general survey of the pharmacological, antidotal, and therapeutic action of the more potent drugs which the pharmacist is called upon to dispense. Lectures and recitations (54 hours).
Mr. Bergy

202. **Pharmacology.** II. 2 Hrs. A continuation of Pharmacy 201. Lectures and recitations (36 hours). Mr. Bergy

203. **Biological and Chemical Therapy.** I. 2 Hrs. A thorough study of hormones, vitamins, glandular products, the newer chemical medicinals, and the methods of preparation and standardization of biologicals. (36 hours).
Mr. Bergy

205. **History of Pharmacy.** I. 2 Hrs. Mr. Bergy

The School of Physical Education and Athletics

ORGANIZATION

For purposes of administration and instruction the School of Physical Education and Athletics is organized into the following departments:

I. Service program for men.

II. Service program for women.

III. Curriculum for majors and graduate students preparing for positions in health and physical education, athletic coaching, and recreation.

IV. Intramural Sports.

The various departments of the school serve the students of all departments of the University by providing a systematic program of physical education and recreation.

The department of curriculum for majors provides professional training for all men and women who are desirous of becoming teachers of physical education and coaches in high schools and colleges, or directors of public recreation. Those who complete the course will also have satisfied the prerequisites for entrance into departments in universities giving training in physical therapy. Anyone completing the course of study outlined by the school and authorized by the University and receiving an honor-point average of one honor point for each credit hour taken in the University qualifies for the degree of Bachelor of Science in Physical Education or Bachelor of Science in Recreation. Courses are also offered in health and physical education at the graduate level leading to the Master of Science degree. The bulletins and announcements of the Graduate Council should be referred to for further details of the residence and course requirements.

The Standing Committees

GRADUATE: Mr. Holter; Miss Griffin and Mr. Romney.

PLACEMENT AND RECOMMENDATION: Miss Griffin; Mr Tork and Mr. Eicher.

SCHOLARSHIP: Miss Hurst; Mr. Tork and Mr. Semon.

INTRAMURAL SPORTS: Mr. Semon; Miss White and Mr. Scherlacher.

ATHLETIC BOARD: G. O. Romney; C. L. Colson, H. M. Fridley, and J. O. Knapp, faculty members; G. W. Jackson and I. L. VanVoorhis, Alumni members; R. G. Gentry, student member; and Wm. G. Thompson, Board of Governors member, ex-officio.

REQUIREMENTS FOR THE DEGREE IN PHYSICAL EDUCATION

The Degree of Bachelor of Science in Physical Education may be conferred upon any student who satisfies the entrance, school and department requirements and offers 128 hours[2] with an average grade of C.

Required and Elective Subjects

Of the 128 hours which are required for the degree of Bachelor of Science in Physical Education, at least 40 hours are required in the School of Physical Education and Athletics. The remaining hours must be selected from such courses as may be approved by the adviser. A candidate for a degree is required to make a selection of one of the teaching combinations on page 301 and to complete the number of semester hours required in each teaching group.

The courses are arranged to meet the University requirements for the degree of Bachelor of Science in Physical Education as well as the state requirements for certification. The curriculum for the four-year course has been so arranged that consideration is given to the various activities which should constitute a well-rounded program of physical education for boys and girls of high-school age. These courses are arranged in ten groups as follow:

A. Required courses in physical education which include practice of physical education courses for men are: P. E. 5, 21, 22, 23, 24, 51, 52, 54, 66, 121, 123, 125, 126, 127, 132, 135, 151, 152, 153, 154; and for women: P. E. 5, 31, 32, 33, 34, 35, 36, 54, 61, 66, 127, 132, 133, 134, 135, 161, 162.

B. Required theory courses in physical education for both men and women unless otherwise indicated are: P. E. 67 (W), 71, 74, 77, 175, 176 (M), 178 (W), 181, 191, 234 (M), 235 (M), and 278.

C. Required courses in recreation are: Recreation 1, 2, 3, and 122.

D. Required courses in Health Education are: Health Education 2 and 101.

E. Required courses in English and speech.

F. Required courses in science which furnish a background for physical education.

G. Required courses in Education which consider the principles of general education.

H. Required courses in social studies.

I. Required courses in military science for men of the University.

J. Elective courses which are taken at the pleasure of the student.

It is understood that a sound and vigorous body is essential to all students who elect this curriculum. Each student must therefore, pass a thorough physical examination before he will be allowed to enroll in this program. Special emphasis is placed upon the personal and professional qualifications of the student as well as upon a high standard of scholarship.

Student teaching in physical education is available in the University Rural High School, the University Laboratory Elementary School, and in the elementary schools of Morgantown. Opportunity is provided also in the Rural High School for practice coaching of high-school athletic teams. Student assistance in the University Service Program in physical education is required of both men and women.

[2]Students may decrease the number of hours required for graduation by doing work of superior quality. For details see page 56.

Recommendation for Certification

The prospective teacher who intends to apply for certification for school service in the state should take care to satisfy the requirements for other teaching subjects and the required courses in education and physical education.

The Certification Requirements

For a statement of the conditions governing the preparation of high-school teachers and their recommendation to the State Board for certification, see the special Bulletin, Requirements Applicable to Degrees and to Teacher Certification.

The General Physical Education Requirements for Certification of all Teachers Other Than Those in Physical Education

All students who plan to be certificated to teach must meet the University requirements of a minimum of four (4) hours (men) and six (6) hours (women) of Health and Physical Education. The specific courses offered to meet this requirement are as follows: FOR MEN (except majors in physical education): Physical Education 1* (1) 2* (1) Health Education 180 (2). Total, 4 hrs. FOR WOMEN (except majors in physical education): One course in each of the following groups: Athletics 9 or 10; Dancing 2, 3, 4, 5, or 15; Individual Activity 6, 7, 8, 17, or 57; Swimming 1 or 16; Health Education 180. Total 6 hrs.

THE SERVICE PROGRAM FOR MEN

Associate Professor TORK; Assistant Professors HARRICK, RODGERS, SMITH, and SEMON; Instructors BARNUM, EICHER, HOWELL, PATTON, and VOST

The courses offered in this department are designed to meet the needs of the men of the University for an organized program of instruction and recreation during their period of residence. The purposes of the department are to develop recreational skills which can be enjoyed while in college and invested in leisure time after college, to establish habits of regular participation, and to develop favorable attitudes toward wholesome play.

Students completing Physical Education 1 and 2 meet the University requirements of two hours' credit in physical education as a prerequisite for graduation of all students subject to this requirement.

During Freshman Week all freshmen will report to the Health Service for physical and medical examination. These examinations are the guide in the selection of a program of physical education for the individual student.

Courses

1. **Service Program for Men.** I. 1 Hr. Required of all freshmen men in the University (except majors in physical education).
   Students who are found to be physically unable to engage in regular activity will be assigned to the **restricted group** for a restricted program of physical education recommended by the University physician and under the direction of the Staff of the department.
   All other students will be assigned to the **regular group** for the regular program of physical education under the direction of the Staff. These

*This requirement should be met by the men in their first year of residence and by the women in their first two years of residence.

students will be organized into groups for instruction and organized competition in the following activities:
Calisthenics, running, apparatus, tumbling and medicine ball, touch football, badminton, relays, basketball, boxing, wrestling, and volleyball.
Mr. Tork and Staff

2. **Service Program for Men. II.** 1 Hr. Continuation of course I. Required of all freshmen men in the University (except majors in physical education).
Students in the regular program will be organized into groups for organized competition in the following activities:
Calisthenics, running, apparatus, tumbling and medicine ball, basketball, group games, handball, track and field relays, bag striking, softball, and baseball. Mr. Tork and Staff

THE SERVICE PROGRAM FOR WOMEN

Professor GRIFFIN; Assistant Professors ERLANGER and HURST; Instructor WHITE

The courses offered in this department are designed to meet the needs of the women of the University for an organized program of instruction and recreation during their period of residence. Four semesters of two periods per week are required for graduation of all women students unless they enter with 58 hours of advanced credit. The offerings include both indoor and outdoor activities, and students may make a choice of courses within each classification. One semester's work is required in each of the following groups; the four semesters of work should be selected from them:

Group 1—Physical Education 1 or 16	(Swimming)
Group 2—Physical Education 2, 3, 4, 5, or 15	(Dancing)
Group 3—Physical Education 6, 7, 8, 17, or 57	(Individual Sport)
Group 4—Physical Education 9 or 10	(Group Sport)

Courses

These courses need not be taken in sequence:

1. **Swimming and Diving. I, II.** 1 Hr. Staff
2. **Elementary Modern Dance. I, II.** 1 Hr. Staff
3. **Folk Dance. I, II.** 1 Hr. Staff
4. **Tap Dance. II.** 1 Hr. Staff
5. **Ballroom Dance. I.** 1 Hr. (Limited to beginners) Staff
6. **Stunts, Tumbling, and Pyramid Building. I, II.** 1 Hr. Staff
7. **Archery. I, II.** 1 Hr. Staff
8. **Minor Sports. I, II.** 1 Hr. Staff
9. **Athletics. I.** 1 Hr. Soccer and volleyball. Staff
10. **Athletics. II.** 1 Hr. Basketball and softball. Staff
11. 12, 13, and 14. **Restricted Activities. I, II.** 1 Hr. (May be substituted for the required courses on recommendation of the Health Service.) Staff
15. **Advanced Modern Dance. I, II.** 1 Hr. PR: Phys. Ed. 2. Staff
16. **Advanced Swimming and Diving. I, II.** 1 Hr. PR: Phys. Ed. 1 Staff
17. **Tennis. II.** 1 Hr. Staff

57. Gymnastics. I, II. 1 Hr. Conditioning exercises. Staff

101, 102. Service Program for Junior Women. I and II. 1 Hr. Students may select any course from the above groups for which they have not previously received credit. Staff

103, 104. Service Program for Senior Women. I and II. 1 Hr. Students may select any course from the groups for which they have not previously received credit. Staff

THE CURRICULUM FOR PHYSICAL EDUCATION MAJORS

The curriculum for majors is organized to provide professional training for men and women who are desirous of becoming teachers of health and physical education in the high schools and colleges. The courses are arranged to meet the University requirements for the degree of Bachelor of Science in Physical Education as well as the state requirements for certification.

The Curriculum

(Leading to the Degree of Bachelor of Science in Physical Education)

Physical education for men (44), for women (41), health education (4); recreation (8); English and speech (12); social studies (12); science (20); education (20); military science (men) (8); pertinent electives by advisement.

Note 1: Humanities 1 may be substituted for 4 hours of social studies, and Humanities 2 fulfills the requirements in English literature.

Note 2: Courses marked (M) are open to men; courses marked (W) are open to women, all others are open to both men and women.

Note 3: "PR" indicates courses having prerequisites.

FIRST YEAR				SECOND YEAR			
First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Sec. Sem.*	*Hrs.*
English 1	3	English 2	3	Phys. Sci. 1 or	4	Phys. Sci. 2 or	4
Biology 1	3	History 53 or	3	Chemistry 1	4	Chemistry 2	4
History 52 or	3	Humanities 2	4	P. E. 51 (M)	1	P. E. 38 (W)	
Humanities 1	4	P. E. 22 (M)	1	P. E. 52 (M)	1	(electives)	1
P. E. 5	1	P. E. 24 (M)	1	P. E. 61 (W)	1	P. E. 54	1
P. E. 21 (M)	1	P. E. 32 (W)	1	P. E. 67 (W)	2	P. E. 66	1
P. E. 23 (M)	1	P. E. 34 (W)	1	P. E. 77	2	P. E. 74	4
P. E. 31 (W)	1	P. E. 36 (W)	1	Recr. 2	2	Recr. 3	2
P. E. 33 (W)	1	Recr. 1	2	Speech 11	3	Hlth. Ed. 2	2
P. E. 35 (W)	1	Mil. Sci. 2 (M)	2	Mil. Sci. 3 (M)	2	Mil. Sci. 2 (M)	2
P. E. 71	1	Elective	3 or 4	Elective (W)	2	Elective (W)	2
Mil. Sci. (M)	2						
Men	16 or 17	Men	16 or 17	Men	15		—
Women	15 or 16	Women	15 or 16	Women	16		16

THIRD YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Ed. 106	3	Ed 109 (M)	2
Ed. 109 (W)	2	Zoology 151	4
P. E. 121 (M)	2	P. E. 126 (M)	1
P. E. 123 (M)	1	P. E. 132	1
P. E. 125 (M)	1	P. E. 134 (W)	1
P. E. 127	2	P. E. 176 (M)	3
P. E. 133 (W)	1	P. E. 178 (W)	3
P. E. 135	1	P. E. 181 (M)	2
P. E. 175	3	P. E. 235 (M)	2
P. E. 181 (W)	2	Recr. 122	2
P. E. 234 (M)	2	Electives (W)	5
Hlth. Ed. 101	2		
Men	17	Men	17
Women	16	Women	16

FOURTH YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
P. E. 151 (M)	1	P. E. 152 (M)	1
P. E. 153 (M)	1	P. E. 154 (M)	1
P. E. 161 (W)	2	P. E. 162 (W)	2
P. E. 191	2	P. E. 278	3
Ed. 120	2	Ed. 120	2
Ed. 152	2	Ed. 152	2
Ed. 214	2	Ed. 214	2
Ed. 224	3	Ed. 224	3
or electives		or electives	
Electives (M)	3	Electives (M)	2
Electives (W)	4	Electives (W)	3
Men	16	Men	16
Women	17	Women	17

THE COURSES OF INSTRUCTION

Professors ROMNEY, GRIFFIN, and MORRIS; Associate Professors HOLTER and TORK; Assistant Professors ERLANGER, HARRICK, HURST, RODGERS, SCHERLACHER, SEMON, and SMITH; Instructors BARNUM, EICHER, HOWELL, KERN, LAWRENCE, PATTON, WHITE, and YOST

LOWER DIVISION

Physical Education

5. Ballroom Dancing. I and II. 1 Hr. Miss Erlanger

21. Football. I. 1 Hr. Theory and practice in fundamentals. Messrs. Harrick and Yost

22. Apparatus and Tumbling. II. 1 Hr. Fundamentals. Mr. Barnum

23. Basketball. I. 1 Hr. Theory and practice in fundamentals. Mr. Patton and Staff

24. Baseball. II. 1 Hr. Theory and practice in fundamentals. Messrs. Harrick and Rodgers

31. Athletics. I. 1 Hr. Fundamentals, skills, and practice in playing hockey, soccer, speedball, and basketball. (W) Miss White

32. Athletics. II. 1 Hr. Technique and practice in teaching and officiating basketball. Fundamental skills and practice in softball. (W) PR: P. E. 31. Miss White

33. Swimming and Diving. I. 1 Hr. Elementary swimming and diving. (W) Staff

34. Advanced Swimming. II. 1 Hr. Practice and technique of instruction. (W) PR: P. E. 33. Staff

35. Elementary Modern Dance. I. 1 Hr. Techniques of modern dance. Knowledge of historical background of dancing from primitive times to present. (W) Miss Erlanger

36. Advanced Modern Dance. II. 1 Hr. Continuation of P. E. 35, including methods of teaching. (W) PR: P. E. 35. Miss Erlanger

38. Dance Composition. II. 2 Hrs. Problems in force, time, and space as elements of expressive movement. Elective. (W) PR: P. E. 35, 36, 67. Miss Erlanger

51. **Track and Field Athletics.** I. 1 Hr. Theory and practice in fundamentals. (M) Mr. Smith

52. **Wrestling and Boxing.** II. 1 Hr. Theory and practice in fundamentals. (M) Mr. Harrick

54. **Minor Sports** II. 1 Hr. Theory and practice in fundamentals of archery, badminton, bowling, golf, handball, tennis, and volleyball. Staff

61. **Stunts, Tumbling, and Heavy Apparatus.** II. 1 Hr. Pyramid building. Skills in heavy apparatus. (W) Miss White

66. **Graded Games and Lead-up Games.** II. 1 Hr. Games for all ages which may be used in home, school, playground, and gymnasium, and lead-up games in various sports. Miss Hurst

67. **Movement and its Rhythmic Structure.** I. 2 Hrs. Understanding of nature and scope of rhythm in physical-education program. (W) PR: P. E. 35, 36. Miss Lawrence

71. **Introduction to Physical Education.** I. 1 Hr. Orientation course. Purposes, scope, and possibilities in health education, physical education, recreation, and coaching in school program. Staff

74. **Anatomy.** II. 4 Hrs. PR: Biology 1. Dr. Morris

77. **History of Physical Education.** I. 2 Hrs. Development of physical education from early civilization to present. Miss Griffin

Health Education

2. **Personal and Community Hygiene.** II. 2 Hrs. Those phases of hygienic living which should be understood by all college students. Special emphasis on personal aspects of hygiene. Mr. Semon

Recreation

1. **Introduction to Recreation.** II. 2 Hrs. A framework into which the other recreation courses, with all their implications, will fit. History; trends; concepts; relationship to other fields; survey of national organizations, leaders, and literature. Mr. Scherlacher
2. **Indoor and Outdoor Recreation Centers.** I. 2 Hrs. Introduction to planning and operation of programs. PR: Rec. 1. Mr. Tork
3. **Camping.** II. 2 Hrs. Introduction to camping movement. Purposes, camp sites, equipment, activities, vocational opportunities, and qualifications of camp personnel, particularly the counselors. PR: Rec. 1, 2. Mr. Harrick

UPPER DIVISION

Physical Education

121. **Athletic Conditioning and Training.** I. 2 Hrs. Lectures, demonstrations, and practice work in training and conditioning of athletes. (M) PR: P. E. 74. Mr. Smith

123. **Swimming, Life-saving, and Water Safety.** I. 1 Hr. Theory and practice in aquatics and safety and their use in the program of physical education. Opportunity to qualify for American Red Cross Water Safety Instructor Certificate. (M) Mr. Barnum

125. **Service Program Assisting.** I. 1 Hr. (M) Mr. Tork and Staff

126. **Service Program Assisting.** II. 1 Hr. (M) Mr. Tork and Staff

127. **First Aid.** I. 2 Hrs. Standard and advanced first aid as outlined by American Red Cross plus special course given by representative from National Red Cross headquarters. Miss Hurst and Mr. Yost

132. **Folk Dance.** II. 1 Hr. European-American Folk Dances. Staff

133. **Tap Dance. I.** 1 Hr. Elective. Miss Hurst

134. **Gymnastics. II.** 1 Hr. Swedish, German, and Danish gymnastic systems as background for understanding of modern program. (W) Staff

135. **Ballroom Dance. I and II.** 1 Hr. Methods of teaching. PR: P.E. 5. Miss Erlanger

151. **Theory of Coaching Football. I.** 1 Hr. Theory and practice. Various systems and styles of play. (M) PR: P. E. 21. Messrs. Rodgers and Yost

152. **Theory of Coaching Track. II.** 1 Hr. Theory and practice. Special lectures and practical experience in officiating; administration of track and field meets. (M) PR: P. E. 51. Mr. Smith

153. **Theory of Coaching Basketball. I.** 1 Hr. Theory and practice. Various systems and styles of play. (M) PR: P. E. 23. Mr. Patton

154. **Theory of Coaching Baseball. II.** 1 Hr. Theory and practice; special lectures and practical experience in officiating. (M) PR: P. E. 24. Mr. Harrick

161. **Materials Summary. I.** 2 Hrs. Summary of physical-education activities, officiating in intramural games. (W) Staff

162. **Materials Summary. II.** 2 Hrs. Continuation of PE. 161. (W) Staff

Theory Courses in Physical Education

UPPER DIVISION

For Men and Women

175. **Kinesiology. I.** 3 Hrs. Principles of mechanics of bodily movements in relation to anatomical structure. PR: P. E. 74. Miss White

176. **Modified and Corrective Activities. II.** 3 Hrs. Diagnosis of abnormal cases found in classroom including overweight, underweight, post-operative, postural, and flat-foot cases, with prescription of activities for their correction. (M) PR: P. E. 175. Mr. Yost

178. **Modified and Corrective Activities. II.** 3 Hrs. Analysis of normal posture and individual deviations with treatment of latter by physical activity and massage. Personal health problems that can be treated by exercise. (W) PR: P. E. 175. Miss White

181. **Safety Education. II.** 2 Hrs. Safety needs and practices in home, on highways and streets, in schools and on playgrounds, and in industry. Educational procedures and programs of education at various levels. Miss Griffin

191. **Introduction to Tests in Health and Physical Education. I, S.** 2 Hrs. A background course in physical-achievement tests. History of development; review of outstanding tests. Essential procedures used in evaluating tests and their results, including statistical analysis. Mr. Holter

234. **Officiating Football. I.** 2 Hrs. Rules, techniques of officiating, and laboratory work. Mr. Tork

235. **Officiating Basketball. II.** 2 Hrs. Rules, techniques of officiating, and laboratory work. (M) Mr. Tork

278. **Administration of Physical Education. II and S.** 3 Hrs. Modern theories in physical education and guiding principles in organization and administration of the program. Open only to majors who have completed the requirements for the first three years in the Physical Education Curriculum. Mr. Romney

Health Education

101. **School Health Problems. I.** 2 Hrs. Problems facing teachers and school administrators in the school day. Mr. Holter

180. Public School Health. I, II. 2 Hrs. Meets general requirements for state teachers' certificates. (Not required of majors in physical education.) Dr. Morris

Recreation

122. Youth Organizations and Group Work in Recreation. II. 2 Hrs. National organizations such as 4-H Clubs, Y.W.C.A., Y.M.C.A., Boys' Clubs, Boy Scouts, and Campfire Girls. Their place in the community.. Leadership approaches. Examination of group-work method. PR: Rec. 1. Mr. Scherlacher

Suggested Teaching Combinations for First-class High-school Certification

1. Physical education and biological science.
2. Physical education and mathematics.
3. Physical education and social studies.
4. Physical education and English.
5. Physical education and physical and general science.
6. Physical education and physical science.
7. Physical education and biological and general science.
8. Other combinations approved by the adviser.

Recreation Minor for Physical Education Majors

Those students who, in addition to preparing for physical education as a first teaching field, have also the objective of fitting themselves for recreation leadership responsibilities in schools or in recreation programs sponsored by or in conjunction with school systems or as added opportunities for service and increased income in summer recreation programs in communities, industries, or private agencies, are encouraged to take the following courses as a minimum:

	Hours
Recreation 5 (Crafts)	1
Recreation 7 (Music)	1
Recreation 8 (Nature Recreation)	2
Recreation 10 (Recreation Dramatics)	1
Recreation 106 (Leadership Techniques)	2
Recreation 201 (Social Events)	1
Journalism 112 (Public Relations)	2
	10

REQUIREMENTS FOR THE DEGREE IN RECREATION

The Degree of Bachelor of Science in Recreation may be conferred upon any student who satisfies the entrance requirements and offers 128 hours with an average grade of C.

REQUIRED AND ELECTIVE SUBJECTS

Of the 128 hours which are required for the degree of Bachelor of Science in Recreation at least 40 hours are required in the School of Physical Education and Athletics. The remaining hours must be selected from such courses as

may be approved by the adviser. It is generally advisable for those entering the recreation profession to fortify themselves particularly in at least one interest area besides the physical-education activities by electing as many courses as possible in arts and crafts, or dramatics, or music, or nature lore.

The courses are arranged in nine groups and meet the University requirements for the degree of Bachelor of Science in Recreation.

These are in addition to Recreation courses 1, 2, 3, and 122, required of all physical-education majors.

A. Required courses in recreation: Recreation 1, 3, 5, 7, 8, 10, 102, 104, 106, 122, 201, 202, 204, and 282.
B. Required courses in physical education.
C. Required courses in health education.
D. Required courses in English and speech.
E. Required courses in science.
F. Required course in education.
G. Required courses in social studies.
H. Required courses in military science for men of the University.
I. Elective courses: Students preparing themselves for a particular field of recreation leadership responsibility will elect courses strengthening themselves for the field selected. For example, those interested in industrial recreation will elect Recreation 283 and such other courses as labor relations and personnel management. Recreation leadership in social agencies, municipal and governmental fields, rural areas, and in school-sponsored programs in similar fashion require special complementary courses pertinent to each field.

THE CURRICULUM IN RECREATION

(Leading to the Degree of Bachelor of Science in Recreation)

NOTE: Courses marked (M) are open to men; courses marked (W) are open to women; all others are open to both men and women. "PR" indicates courses having prerequisites.

FIRST YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
English 1	3	English 2	3
Humanities 1	4	Humanities 2	4
Biology 1	4	Speech 11	3
P. E. 21 (M)	1	P. E. 5	1
P. E. 23 (M)	1	P. E. 22 (M)	1
P. E. 31 (W)	1	P. E. 24 (M)	1
P. E. 33 (W)	1	P. E. 32 (W)	1
P. E. 35 (W)	1	P. E. 34 (W)	1
P. E. 71	1	P. E. 36 (W)	1
Mil. Sci. 1 (M)	2	Recr. 1	2
	—	Mil. Sci. 2 (M)	2
			—
	Men 16		Men 17
	Women 15		Women 16

SECOND YEAR

First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*
Soc. Sci. 1	3	Soc. Sci. 2	3
Psychology 1	3	Speech 51	3
Speech 50	3	P. E. 54	1
Music 77	1	P. E. 66	1
Recr. 5	1	P. E. 74	4
Recr. 7	1	Recr. 3	2
P. E. 61 (W)	1	Recr. 8	2
Mil. Sci. 3 (M)	2	Recr. 10	1
Electives 2 or	3	Mil. Sci. 4 (M)	2
	—		—
	16		Men 18
			Women 17

THIRD YEAR				FOURTH YEAR			
First Sem.	*Hrs.*	*Sec. Sem.*	*Hrs.*	*First Sem.*	*Hrs.*	*Sec. Sem.*	*Hrs.*
Ed. 106	3	Art 127	3	Social work	3	Sociology 241	3
Recr. 106	2	P. E. 132	1	Recr. 201	1	Journalism 112	2
Hlth. Ed. 101	2	P. E. 135	1	Recr. 282	2	Recr. 202	2
P. E. 123 (M)	1	Recr. 102	2	P. E. 281	2	Recr. 204	2
P. E. 127	2	Recr. 104	2	Electives	8	Electives	7
P. E. 133 (W)	1	Recr. 122	2				
Electives	6	Pol. Sci. 106	3				
		Electives	2				
	16		16		16		16

Courses of Instruction in Recreation

Professors ROMNEY, GRIFFIN, and MORRIS; Associate Professors HOLTER and TORK; Assistant Professors ERLANGER, HARRICK, HURST, RODGERS, SCHERLACHER, SEMON, and SMITH; Instructors BARNUM, EICHER, HOWELL, KERN, LAWRENCE, PATTON, WHITE, and YOST

LOWER DIVISION

Recreation

1. **Introduction to Recreation.** II. 2 Hrs. A framework into which the other recreation courses, with all their implications, will fit. History; trends; concepts; relationship to other fields; survey of national organizations, leaders, and literature. Mr. Scherlacher
2. **Indoor and Outdoor Recreation Centers.** I. 2 Hrs. Introduction to planning and operation of programs. Mr. Tork
3. **Camping.** II. 2 Hrs. Introduction to the camping movement. Purposes, camp sites and equipment, activities, vocational opportunities, and qualifications of camp personnel, particularly the counselors. Mr. Harrick
5. **Introduction to Arts and Crafts in Recreation.** I. 1 Hr. Workshop course. Place of arts and crafts in recreation, their organization, and integration with other phases of recreation. Staff
7. **Introduction to Music in Recreation.** I. 1 Hr. Function of music in recreation program and how it is organized and adapted to meet varied tastes and needs. Staff
8. **Introduction to Nature Recreation.** II. 2 Hrs. Lecture and workshop course; methods and approaches of nature lore in recreation, including camping. Staff
10. **Introduction to Dramatics in Recreation.** II. 1 Hr. Workshop course. Importance and organization of dramatics in recreation program; adaptation to various phases of recreation to meet varied needs; methods of presentation. Mr. Scherlacher

Physical Education

5. **Ballroom Dance.** I, II. 1 Hr. Staff
21. **Football.** I. 1 Hr. Theory and practice in fundamentals.. (M) Messrs.
22. **Apparatus and Tumbling.** II. 1 Hr. Fundamentals. (M) Mr. Barnum, Harrick and Yost
23. **Basketball.** I. 1 Hr. Theory and practice in fundamentals. (M) Mr. Patton
24. **Baseball.** II. 1 Hr. Theory and practice in fundamentals. (M) Messrs. Harrick and Rodgers

31. **Athletics. I.** 1 Hr. Fundamentals, skills, and practice in playing hockey, soccer, speedball, and basketball. (W) Miss White
32. **Athletics. II.** 1 Hr. Technique and practice in teaching and officiating basketball. Fundamental skills and practice in softball. (W) Miss White
33. **Swimming and Diving. I.** 1 Hr. Elementary. (W) Staff
34. **Advanced Swimming. II.** 1 Hr. Practice and technique of instruction. (W) Staff
35. **Elementary Modern Dance. I.** 1 Hr. Techniques; knowledge of historical background of dancing from primitive times to present. (W) Miss Erlanger
36. **Advanced Modern Dance. II.** 1 Hr. Continuation of P. E. 35, including methods of teaching. (W) Miss Erlanger
54. **Minor Sports. II.** 1 Hr. Theory and practice in fundamentals of archery, badminton, bowling, golf, handball, tennis, and volleyball. Staff
61. **Stunts, Tumbling, and Heavy Apparatus. II.** 1 Hr. Includes pyramid building and skills in heavy apparatus. (W). Miss White
66. **Graded Games and Lead-up Games. II.** 1 Hr. Games for all ages which may be used in home, school, playground, and gymnasium, and lead-up games in various sports. Miss Hurst
71. **Introduction to Physical Education. I.** 1 Hr. Orientation course. Purposes, scope, and possibilities in health education, physical education, recreation, and coaching in school program. Staff
74. **Anatomy. II.** 4 Hrs. Dr. Morris

UPPER DIVISION

Recreation

102. **Program Planning. II.** 2 Hrs. Fundamentals for general program planning; considering needs, facilities, age groups, local customs, climatic factors, etc. Planning involved in specific activities. Mr. Scherlacher
104. **Functional Planning of Recreation Facilities. II.** 2 Hrs. Problems and principles governing the planning for function and the effective usage of facilities in recreation. Adaptation of existing facilities for multiple use. Mr. Scherlacher
106. **Leadership and Leadership Techniques. II.** 2 Hrs. Meaning of leadership and its application to field of recreation. Mr. Scherlacher
122. **Youth Organizations and Group Work in Recreation. II.** 2 Hrs. National organizations such as 4-H Clubs Y.W.C.A., Y.M.C.A., Boys Clubs, etc. will be studied as to how they fit into the community picture and what leadership approach they use. Examination of group-work method. Mr. Scherlacher
201. **Social Events in Recreation. I.** 1 Hr. Workshop course. Planning and organization of parties, banquets, dances, tours, picnics, and other special social programs. Actual social events as class projects will be staged on Campus. Mr. Scherlacher and Staff
202. **Philosophy of Recreation. II.** 2 Hrs. Interpretation of recreation as a way of life, as a basic part of the livin process, and as satisfaction of real human wants; importance to individual, community, and national life; social and economic significance. Mr. Romney
204. **Recreation Hobbies. II.** 2 Hrs. Lecture and workshop. Value of hobbies to youth and adults; participation in various types of hobbies; methods of organization and presentation; importance and scope of hobbies. Mr. Scherlacher

271. Administration of Camps and the Preparation of Camp Counselors. II. 3 Hrs. Principles involved in modern camping program; methods of organization and administration of organized camps. Special problem in administration or program. PR: Rec. 1, 2, 3, or equivalents. Mr. Harrick

282. Administration of Public Recreation. II. 2 Hrs. General principles of administration; organization of administrative procedures in effective recreation service to the community. Legal aspects, finance, programs, public relations, facilities, etc. Mr. Scherlacher

283. Organization and Development of Industrial Recreation. II. 2 Hrs. Primarily for students who have had some work or experience in recreation and are interested in a more complete knowledge of the field or plan to seek positions in industrial recreation. Mr. Tork

Physical Education

123. Swimming, Life-saving, and Water Safety. I. 1 Hr. Theory and practice in aquatics and safety and their use in the program of physical education. Opportunity to qualify for the American Red Cross Water Safety Instructor Certificate. (M) Mr. Barnum

127. First Aid. I. 2 Hrs. Standard and advanced first aid as outlined by American Red Cross plus special course given by a representative from National Red Cross headquarters. Miss Hurst and Mr. Yost

132. Folk Dance. II. 1 Hr. European-American Folk Dances. Staff

135. Ballroom Dance. I and II. 1 Hr. Methods of teaching. Miss Erlanger

181. Safety Education. I. 2 Hrs. Safety needs and practices in home, on highways and streets, in schools and on playgrounds, and in industry. Educational procedures and programs of education at various levels. Miss Griffin

Health Education

101. School Health Problems. I. 2 Hrs. Problems facing teachers and school administrators in the school day. Mr. Holter

Electives

Art 121 (Fundamentals of Design) 3
Art 122 (Fundamentals of Design) 3
Art 127 (Arts and Crafts) II 2
Art 30 or 130 (Appreciation of Art) I, II 3
English 5 (American Literature) I, II 3
English 182 (Masterpieces of World Literature) II 3
Psych. 116 (Social Psych.) 3
Zool. 5 or 105 (Ornithology) II 2
Forestry 142 (Recr. Devl.) II 2
Home Ec. 138 (Home Crafts) I, II 2
Jour. 1, 2 (Newspaper Rptg.) I, II 6
Speech 120 (Group Discussion) I 3
Speech 200 (Art of Story Telling) II 3
Speech 140 (Intro. to Radio) I 3
Speech 161 (Stagecraft) 3
Speech 162 (Play Directing) I 3
Speech 163 (Play Production) II 3
Speech 164 (Theater Workshop) I, II 1-3

The major curriculum in recreation is planned primarily to prepare for the assumption of professional recreation responsibilities in community systems and services, public and private, in industry, public housing, and similar fields. Those recreation majors who wish to be certificated to teach physical education should take during the regular four-year period, and in whatever additional terms are necessary, the following courses in addition to those listed in the recreation curriculum:

Course Number and Title		*Men*	*Women*
P.E. 51	Track and Field Athletics	1	
P.E. 52	Wrestling and Boxing	1	
P.E. 67	Movement and Its Rhythmic Structure		2
P. E. 77	History of Physical Education	2	2
P.E. 121	Athletic Conditioning and Training	2	
P.E. 125	Service Program Assisting	1	
P.E. 134	Gymnastics		1
P.E. 151	Theory of Coaching Football	1	
P.E. 152	Theory of Coaching Track	1	
P.E. 153	Theory of Coaching Basketball	1	
P.E. 154	Theory of Coaching Baseball	1	
P.E. 161	Materials Summary		2
P.E. 162	Materials Summary		2
P.E. 175	Kinesiology	3	3
P.E. 176	Modified and Corrective Activities	3	
P.E. 178	Modified and Corrective Activities		3
P.E. 191	Tests in Health and Physical Education	2	2
P.E. 234	Basketball Officiating	2	
P.E. 235	Football Officiating	2	
P.E. 278	Administration of Physical Education	3	3
Hlth. Ed. 2	Personal and Community Hygiene	2	2

Plus Education 109, 120, 152, 214, 224, and 221 (13 hours)

Those who plan to practice recreation leadership in addition to teaching in such fields as English, social studies, and art can arrange to qualify for the first teaching field by taking extra work to meet the requirements in the particular field during whatever period is necessary.

RECREATION MINOR

Those students who are majoring in fields other than physical education (e.g. art, music, social work, education, etc.) may elect to work for a minor in recreation. This will equip them for leadership responsibility in various types of recreation service in private agencies, industries, summer recreation programs in communities, etc. Students majoring in education may prepare themselves for recreation leadership in schools or in recreation programs sponsored by or in conjunction with school systems. The following courses are required for a minor in recreation:

Rec. 1	Introduction to Recreation	2
Rec. 2	Indoor and Outdoor Recreation Centers	2
Rec. 3	Camping	2
Rec. 5	Introduction to Arts & Crafts in Recreation	1
Rec. 7	Introduction to Music in Recreation	1
Rec. 8	Introduction to Nature Recreation	2
Rec. 10	Introduction to Dramatics in Recreation	1
Rec. 106	Leadership and Leadership Techniques	2
Rec. 122	Youth Organizations & Group Work in Rec.	2
Rec. 201	Social Events in Recreation	1

Phys. Ed. 54	Minor Sports	1
Phys. Ed. 66	Graded Games & Lead-up Games	1
Phys. Ed. 123 (M)	or 34 (W) Swimming	1
Phys. Ed. 132	Folk Dance	1
Phys. Ed. 135	Ballroom Dance	1
Journalism 122	Public Relations	2
		24

THE GRADUATE CURRICULUM IN PHYSICAL EDUCATION

(Leading to the Degree of Master of Science)

I. CANDIDACY:

The candidate must hold the degree of Bachelor of Science, or its equivalent, from an approved college. The equivalent is determined by the Committee on Graduate Courses of the School of Physical Education and Athletics as follows:

1. At least 24 semester hours, which is an undergraduate minor as described in the University Bulletin. Requirements Applicable to Degrees and to Teacher Certification.

2. Experience in teaching health, physical education, leadership, and coaching may be evaluated by special examination as possible equivalents to some of the undergraduate requirements.

3. Additional undergraduate hours may be required of students who have had inadequate preparation.

II. MATRICULATION:

Students who wish to register in the Graduate School should (1) have an official transcript of college credits sent to the Registrar; (2) file formal application for admission with the chairman of the Graduate Council.

A maximum of six semester hours may, by prior written agreement with the adviser and Graduate Council, be accepted from an approved institution other than West Virginia University, provided the total of all work for the Master's Degree by extension and from another institution shall not exceed 15 semester hours.

Optional routes toward a Master's Degree:

A. Thirty semester hours, including six semester hours of research. (Physical Education 399, thesis). At least 15 hours exclusive of the thesis will be in the School of Physical Education and the remaining hours may be in allied fields. Examination (oral, written, or both, at the discretion of the individual members of the committee) by the candidate's advisory committee. One third of the hours required for the degree must be in courses numbered 300 or above.

B. Thirty-six semester hours, including a minimum of 10 semester hours of approved course work outside the School of Physical Education. Examination (oral, written, or both, at the discretion of the individual members of the committee) by a committee of at least three, one or more of whom shall represent schools other than physical education

One third of the hours required for the degree must be in courses numbered 300 or above.

NOTE: Courses marked by an asterisk (*) are required of all candidates for the Master of Science degree.

224. **Psysiology of Exercise.** I. 2 Hrs. Analysis of psysiological changes which occur in the body during exercise. PR: anatomy and physiology. Miss Erlanger

234. **Officiating Football.** I. 2 Hrs. Rules, techniques of officiating, and laboratory work. (M) Mr. Tork

235. **Officiating Basketball.** II. 2 Hrs. Rules, techniques of officiating, and laboratory work. (M). Mr. Tork

278.* **Administration of Physical Education.** II. 2 or 3 Hrs. Modern theories in physical education and guiding principles in organization and administration of the program. Mr. Romney

279s. **Safety Education—Safe Driving.** S. 1 Hr. Open to selected high-school teachers.

280s. **Safety Education—Safe Driving.** S. 1 Hr. Continuation of P.E. 279s. Mr. Eicher

281. **Safety Education.** I. 2 Hrs. Modern safety-education program and its place in public-school day. Various educational methods which make for reduction of common accidents in factories, home, school, street, camps, and playgrounds. Miss Griffin

287. **History of Physical Education.** I. 2 Hrs. Development of physical education from early civilization to present with particular emphasis on its relation to general education and other world movements. Miss Griffin

290. **Adaptation and Evaluation of Activities in Physical Education..** II. 2 Hrs. Formulation of criteria for continuous curriculum revision in accord with educational principles and in recognition of individual needs, abilities, and interests. Miss Griffin

292. **Principles and Program of Physical Education in Elementary Schools.** I, S. 2 Hrs. Relation of physical education in elementary schools to present-day educational philosophy and procedure. Analysis of courses of study of outstanding city and state departments as a background for formulating tentative curricula and use in local situations. Mr. Tork

293. **Organization and Administration of Intramural Sports for Men and Women.** I. 2 Hrs. Critical analysis with view to justification from standpoint of objectives and of contribution to general welfare of students participating. Problems of organization and administration of programs for men and women on the secondary and college levels. Mr. Semon

294. **Modern Trends and Principles of Physical Education.** II, S. 2 Hrs. Critical analysis of current problems in physical and health education; solution in light of sound principles. Recent trends and probable growth of responsibilities. Mr. Tork

295. **Principles and Practices of Physical Reconditioning.** I. 2 Hrs. Principles and philosophy in building a remedial program, types of injuries, classification of students, and application of remedial exercises. Mr. Yost

369. **Independent Study in Health and Physical Education.** II. 2 Hrs. Opportunity for independent study under supervision for advanced students who have had experience in field. PR: P.E. 378. Staff

374. **Psychology of Coaching.** I. 2 Hrs. Psychological principles underlying present methods of coaching athletic sports. Laws of learning, current experiments, and selection of teaching material. Mr. Tork

376. Methods and Materials in Health Education. I, II. 3 Hrs. Published material in field of health to determine its scientific accuracy and value for teacher or learner. Examination of various media for disseminating health information. Mr. Holter

378.* Problems of Physical Education, Health and Recreation. I, II. 3 Hrs. Content and relationships of problems in physical education, health education, and recreation. Aims to develop critical analysis. Follows seminar procedure and presupposes broad academic experience on part of student. Mr. Holter

389. Tests and Measurement in Health and Physical Education. II. 2 Hrs. Critical and statistical analysis of outstanding tests in health and physical education and their results. Mr. Holter

396.* Research Seminar in Health, Physical Education, and Recreation. II. 3 Hrs. Limited to advanced students. Research techniques as basis for compilation and organization of material for research projects. Each student completes an individual project. The Master's thesis may be initiated in the course. PR: P E. 378. Mr. Holter

399. Thesis. I, II. 2 Hrs. PR: P.E. 378, 396. Mr. Holter

Recreation

201. Social Events in Recreation. I. 1 Hr. Workshop course. Planning and organization of parties, banquets, dances, tours, picnics, and other special social programs. Actual social events as class projects will be staged on Campus. PR: Rec. 1. Mr. Scherlacher & Staff

202. Philosophy of Recreation. II. 2 Hrs. Interpretation of recreation as a way of life, as a basic part of the living process, and as satisfaction of real human wants; importance to individual, community, and national life; social and economic significance. PR: Rec. 1. Mr. Romney

204. Recreation Hobbies. II. 2 Hrs. Lecture and workshop. Value of hobbies to youth and adults; participation in various types of hobbies; methods of organization and presentation; importance and scope of hobbies. PR: Rec. 1. Mr. Scherlacher

282. Administration of Public Recreation. II. 2 Hrs. General principles of administration; organization of administrative procedures in effective recreation service to the community. Study of legal aspects, finance, programs, public relations, facilities, etc. Open only to students who have completed the requirements for the first three years in the Recreation Curriculum. Mr. Scherlacher

283. Organization and Development of Industrial Recreation. II. 2 Hrs. Primarily for students who have had some work or experience in recreation and are interested in a more complete knowledge of the field or plan to seek positions in industrial recreation. PR: 1, 2, 3, 282, or equivalents. Mr. Tork

271. Administration of Camps and Preparation of Camp Counselors. II. 3 Hrs. Principles in modern camping program and methods of organization and administration of organized camps. Special problem in administration or program. PR: Rec. 1, 2, 3, or equivalents. Mr. Harrick

Part IV

Degrees Conferred by the University

DEGREES CONFERRED IN 1946-47

The following is a list of degrees conferred by the University during the year 1946-47. Degrees conferred on August 23, 1946, are indicated by an asterisk (*); those conferred on January 25, 1947, by a double asterisk (**). All other degrees were conferred on Commencement Day, June 2, 1947.

BACHELOR OF ARTS

Louis Everett Alderson	Zoology	Buckhannon
Armande Celestine Amblard	French	Charleston
Hilton Leslie Anderson, Jr.	Pre-Medicine	Kingwood
Lois Ann Andrews	Political Science	Charleston
**Charles Conley Ashton, Jr.	Psychology	Morgantown
**Frankie St. Clair Babcock	Chemistry	Morgantown
*Harry Phillip Bahrick	Psychology	New York, N. Y.
Sam Barile	Physics	Morgantown
Don Albert Barr	Political Science	Moundsville
**Helen Jean Bartlett	Spanish	Fairmont
Charlie Ruth Beidenmiller	Spanish	Wheeling
Howard Verner Bell	Pre-Medicine	Burton
Thomas Russell Bennett	Philosophy	Morgantown
Peter David Beter	History	Huntington
**James Howard Boomer	Pre-Law	New York, N. Y.
Margaret Elizabeth Bootz	Mathematics	Morgantown
Matthias Whitfield Bott	History	Morgantown
Paul Nathan Bowles	Pre-Law	Charleston
Marjorie Anne Boyd	Sociology	Morgantown
John Payton Boyle	Pre-Medicine	Morgantown
Robert Earl Breen	Political Science	Wheeling
Nancy Kent Brown	History	Washington, D. C.
Aaron Zane Browning	History	Switzer
*Mary Jean Burdette	Library Science	Leon
Alys Glasscock Butler	French	Morgantown
**Lucy Harriet Cabell	Psychology	Charleston
Hugo A. Cabrera	Pre-Medicine	Humacao, P. R.
Eva Marie Cappellanti	Speech	Morgantown
Hobart Clifton Carrico	Pre-Law	Morgantown
*Carroll Watson Casto	Pre-Law	Ripley
**Joseph Cefaratti	Pre-Medicine	Uniontown, Pa.
Mary Elizabeth Cobun	Pre-Nursing	Reedsville
Mary Edith Coddington	Economics	Morgantown
Harold Arthur Collins	Pre-Medicine	Hollidays Cove
**Troy Blaine Conner, Jr.	Pre-Law	Morgantown
James Dow Cook	Political Science	Oceana
Carolyn Kenney Cottle	English	Morgantown
**Eddie Lawrence Cox	History	Madison

Stanley Rhey Cox, Jr.	Geology	Morgantown
William Vickers Crabtree	Pre-Medicine	Wellsburg
James Thomas Dailey, Jr.	Pre-Law	Kingwood
Margo Wade Daly	History	Shepherdstown
David Eugene Daugherty	Pre-Medicine	Logan
Mark Gould Davis	Pre-Medicine	Elm Grove
*Preston Caldwell Davis	Pre-Medicine	Morgantown
Harry Ernest DeHaven, Jr.	Pre-Medicine	Clarksburg
Frank James DePond	Political Science	Monongah
Helen Virginia DiCarlo	Sociology	Morgantown
Walter Lee Dinteman	Art	Falling Waters
*Anthony Doria	Pre-Medicine	Bayonne, N. J.
Martha Ann Douglas	Speech	Burnwell
Helen Rae Eddins	Speech	Welch
Doris Kathleen Elrick	English	Mount Storm
*Thomas Jackson Evans	Economics	Bloomsburg, Pa.
*Richard John Ferrara	Pre-Medicine	Morgantown
**Donald Franklin Flick	Zoology	Martinsburg
Russell R. Flowers	Geology	Morgantown
Herbert Hill Fockler	Political Science	Summersville
Robert Franklin Fonner	Geology	Middlebourne
*Emil Eugene Fowler	Zoology	Morgantown
Emma Jane Freeman	Pre-Medicine	Adrian
Carolyn Sayre Frizzell	English	Charleston
Charles Melvin Garrett, Jr.	Pre-Medicine	Weston
*Lena Marie Giannini	Pre-Dentistry	Follansbee
Carolyn Fuller Glasscock	History	Morgantown
*William Howard Godfrey	Pre-Medicine	Morgantown
*Martin Samuel Goldfarb	Pre-Medicine	Charleston
*Harry Arthur Goldstone	Zoology	Connellsville, Pa.
Florine Kirk Hampton	Pre-Medicine	Kermit
Catherine Lucile Hamric	Art	Grafton
Kathleen Barbara Hamrick	Psychology	Clarksburg
**Homer Wyatt Hanna, Jr.	Pre-Law	Charleston
Nellie Mae Harris	Spanish	Ravenswood
Ruth Jane Harris	Pre-Medicine	Weston
James Ray Hartman	Economics	Charleston
Grey Hastings	English	Morgantown
William Adair Hatfield	English	Williamson
Elizabeth Anne Haynes	Mathematics	Morgantown
Ruth Ellen Hearn	English	Clarksburg
**Martha Elaine Heck	Spanish	Clarksburg
**Oliver Morton Henderson	Pre-Medicine	Elm Grove
*Helen Hope Hess	Pre-Medicine	Morgantown
**Hugh Dale Hicks	Political Science	Moundsville
Joan Ruth Hively	English	Dunbar
Laura Jean Holden	Mathematics	Morgansville
*William Reed Holstein	English	South Charleston

**Carlisle Bee Hughes, Jr.	Pre-Medicine	Montgomery
**William Morgan Hughes	Pre-Medicine	McKeesport, Pa.
Harry Charles Humbert	History	Fairchance, Pa.
William Hastings Humes, Jr.	Economics	Wheeling
Margaret Ann Jackson	English	Wayne
Agnes Arbuckle Jefferds	English	Charleston
Robert Dale Johnson	Geology	Everettville
Robert Earl Johnson II	History	Morgantown
Sophie Anne Keiffer	Spanish	Richmond, Va.
Joanne Logan King	Speech	Parkersburg
Phyllis Mae King	Speech	Parkersburg
Robert Edgar King, Jr.	History	Keyser
Max Vernon Kite	Pre-Medicine	Parsons
Edward Franklin Koch, Jr.	Pre-Medicine	Charleston
Victor Stanley Krenosky	Economics	Osage
**John James Laskey	History	Uniontown, Pa.
Eldon Bennett Lee	Pre-Medicine	Morgantown
Jane Cochran Leith	Political Science	Morgantown
John Hayes Lodge	Pre-Medicine	Bridgeport
Paul Fritz Lohmann	Pre-Medicine	Charleston
Chester Lovett	Pre-Law	Charleston
*Arthur Vernon Lundquist	Political Science	Parkersburg
John Frank Luzader	History	Grafton
Charles Wayne Lytton	Geology	Newell
**Bright McCausland	Zoology	Point Pleasant
*Margaret Joan McClain	History	Point Marion, Pa.
Elmer Francis McHugh	Pre-Medicine	Morgantown
William Vernon McNemar, Jr.	Political Science	Logan
Joseph Richard McProuty	Pre-Medicine	Grafton
Eloree Jean MacDonald	English	Headsville
John Austin Malcomb	History	Buckhannon
Jesus M. Maldonado	Zoology	New York, N. Y.
Norman Jack Mallinger	Pre-Law	Wheeling
Sara Jean Malone	Spanish	Clarksburg
*Ross Allen Mechling	Geology	Charleston
Doris Lee Mehlinger	English	Morgantown
*Guy Hobert Michael, Jr.	Pre-Medicine	Parsons
Sarah Boreman Miller	Psychology	Parkersburg
David Gibson Milne	Psychology	Kingwood
Catherine Marie Moore	Speech	Welch
**Matthew Bernard Moore	Pre-Medicine	Crucible, Pa.
Sally Jean Moore	Political Science	Moundsville
Grady Thomas Morgan	Pre-Medicine	Fairmont
Virgil Weaver Myers	Pre-Medicine	Core
Lucille Reva Nach	Zoology	Weirton
*Elizabeth Walton Nash	Speech	Charleston
**James Morgan Nelms	Political Science	Williamson
Samuel Thomas Nicastro, Jr.	Pre-Law	Montgomery

Wilmer Grey Oliphant	Pre-Medicine	Mount Hope
Barbara Lee Paarlberg	Zoology	Keyser
Nancy Reed Palmer	English	Charleston
William Earl Parsons	Pre-Law	Huntington
*Andrew Jim Pasquale	Pre-Medicine	Williamson
*Richard Jeffers Payne	Chemistry	Charleston
**J. Stanley Pease	Pre-Law	Babylon, N. Y.
Robert Burry Pelzel	Mathematics	Charleston
John Benton Perkey, Jr.	Pre-Law	Weston
*Elaine Lynne Perrill	Pre-Medicine	Willard, Ohio
Leon Clair Perry	Pre-Medicine	Madison
Patricia Backus Perry	Speech	Oak Hill
Henry Joseph Pitsenberger	Pre-Medicine	Handley
William Roy Powell	Pre-Dentistry	Salem
George Freeland Pugh	Pre-Medicine	Terra Alta
**Hortenzia Septimia Benchea Raezer	Zoology	Wheeling
Margaret Eleanor Reeder	Spanish	Morgantown
Ann Rich	Pre-Dentistry	Parkersburg
**Benjamin Albert Ritchie	Pre-Law	South Charleston
Henry Havard Roberts	Pre-Medicine	Morgantown
*Jack Geary Robertson	Pre-Dentistry	Clendenin
David Morton Robinson	Pre-Medicine	Clarksburg
Earl Elmore Roles	Pre-Medicine	Lillybrook
**Manuel Eustoquio Royo	Economics	Ponce, P. R.
John Franklin Scarlett	Pre-Medicine	Martinsburg
Morton D. Schumann	Political Science	Charleston
**Paul Shifman	Psychology	New Castle, Pa.
Billie Louise Simms	English	Cameron
George William Singleton	Pre-Law	Charleston
*Boylston Dandridge Smith, Jr.	History	Man
Harold Ray Smith	Zoology	Beckley
*Dana Frances Snider	History	Lillybrook
John Cornelius Southern, Jr.	Pre-Law	Clarksburg
Albert James Spencer	Geology	Morgantown
Judith Helen Elizabeth Stafford	Speech	Bluefield
*Florence Louise Stein	Political Science	Morgantown
**John Frederick Stickel, Jr.	Geology	Morgantown
**Virginia May Stine	English	Grafton
Robert Grant Strader	Political Science	Buckhannon
Claude Strother, Jr.	Physics	Lost Creek
**Wanda Madalou Swiger	History	Clarksburg
Ella Louise Swisher	Economics	Morgantown
Bettie Wilson Syndenstricker	English	Lewisburg
**Seirfine Tallarico	History	Washington, Pa.
Elizabeth Grey Taylor	French	Sutton
Frederick Lionel Thomas, Jr.	Pre-Law	Charleston
John William Thomas	Pre-Medicine	Short Creek

*Nolan Ernest Toothman	Political Science	Clarksburg
Marjorie Ruth Tower	Sociology	Morgantown
Marjorie Gertrude Tyree	Pre-Medicine	Mount Hope
Emma Frances VanGilder	Zoology	Morgantown
**Dorothy Lou Walker	History	Charleston
Thomas Riggs Wilson, Jr.	Economics	Clarksburg
**Frank Marable Yeakle, Jr.	Economics	Winchester, Va.
*Marjorie Gale Zappin	Speech	Williamson

BACHELOR OF SCIENCE (Business Administration)

Alma Jean Anderson	Shinnston
**John Marion Ashcraft, Jr.	Clarksburg
Ruby Ashworth	Welch
**Miles Wellington Bell	Clarksburg
Charles Alton Blowers	Wheeling
**William Jerome Bock	Charleston
Raymond Eugene Brooks	Connellsville, Pa.
Raymond Fenner Buzed	Gassaway
Mary Thies Callihan	Morgantown
**Mary Frances Carder	Morgantown
Warren George Coffman	Lumberport
**Michael Cresap Cox	Wheeling
**James Carney Davis	Fairmont
**Lewis Edward Davis, Jr.	Bergoo
**Richard Lee Davisson	Grafton
James Wyatt Dils IV	Parkersburg
Jacob Edgar Ellis, Jr.	Charleston
Dale Armstrong Englehart	Albright
Robert Eggener Erdlitz	Fairmont
**Edward Eugene Franz	Morgantown
George Carlock Garrison	Montgomery
George Keith Gorrell	Clarksburg
A. B., West Virginia University, 1942	
Arthur A. Hall, Jr.	Morgantown
Richard Earl Hanlen	Charleston
*Phoebe Genevieve Herold	Parkersburg
William Harry Hess	Elkins
George Walton Hill	McMechen
Harold James Hiller	Fredonia, N. Y.
**Thomas Wesley Jackson	Wheeling
Miles John Jorgensen	Fairmont
Peter E. Kaites	Clarksburg
Patricia Nan King	Clarksburg
Charles Albert Leonard	Morgantown
George Nassief Lewis	Moundsville
*Olive Layman Lilly	Morgantown
George Jerome McClure, Jr.	Morgantown
Charles Phillips McLane	Fairmont

Joseph Aaron McVicker	Belington
Joseph Edward Mams	Elkins
**Harold David Moore	Morgantown
Don Jarrett Nickell	Lewisburg
Anthony Perry	Morgantown
Franklin Mahan Powell, Jr.	Steubenville, Ohio
**Lois Kathryn Robinson	Clarksburg
Norval Eugene Rogers	Clarksburg
Alpha "O" Rowland, Jr.	Wellsburg
*Joseph Paul Samuels	Piedmont
William Earl Shingleton	Fairmont
Louis W. Show	Morgantown
William Wilson Simpson	Clarksburg
Renee Marcelle Smith	Elkins
Stephen DeVries Tanner	Morgantown
Marjory Leslie Tetrick	Enterprise
Jack Thorne Turner	Clarksburg
Paul Wilson Umstott	Keyser
Robert Evans Vensel	Wilkinsburg, Pa.
**John Benford Wade	Fairmont
Ralph Kenneth Weekly	Fairmont
*Robert W. Wildey	Ohiopyle, Pa.
Len Loranza Witt, Jr.	Pittsburgh, Pa.
*James David Wood	Crumpler

BACHELOR OF SCIENCE (Chemistry)

**Francis King Cole	Huntington
Merle Burton Davis	Fairmont
Mary Patricia Dougherty	Ridgeley
Lucy Eskew	Charleston
James Franklin Hare, Jr.	Fairmont
Anne Allison Jackson	Clarksburg
*Edith Ann McMillen	Morgantown
Donald Kirk Marchand, Jr.	Morgantown
*Joseph Edwin Milam	Dunbar
*John Daniel Morris	Kenova
Betty Lynn Udy	Bluefield
Pearl Adair Welton	Piedmont
Charles Mervyn Wheeler, Jr.	Rowlesburg
Chris Anthony Zanotti	Weirton

BACHELOR OF SCIENCE (Geology)

George J. Conrad	Fairmont
Jesse LeRoy Dally	Uniontown, Pa.
John Frederick Hall	Leechburg, Pa.
James Hunter Moore	Griffithsville
Coyd Bickley Yost, Jr.	Keyser

BACHELOR OF SCIENCE (Social Work)

**Mary Fayne Acker	Charleston
**Patricia Louise Colebank	Morgantown
**Kathryn Jane Davis	Everettville
Virginia Lee Davis	Morgantown
Alda Constance Fauss	Elkview
Mary Joanna Hickey	Gassaway
*Eloise May Hinkle	Webster Springs
Winifred McGee Hornor	Weston
**Barbara Agnes Kennedy	Fairmont
Betty Ilene Lach	Morgantown
Mary Jean Marlowe	Sutton
Jo Ann Marteney	Weston
Alma Jean Mitchell	Morgantown
Anna Madaline Morgan	Hookersville

BACHELOR OF SCIENCE

John Powell Anderson	Lynchburg, Va.
Jacob Kempe Bos A. B., University of Southern California, 1945	Buckhannon
William Staples Boutwell B. A., Emory and Henry College, 1945	Huntington
Joseph Geza Doboy B. S., Juniata College, 1937	Morgantown
Chester White Eskey	Wheeling
Martin Samuel Goldfarb A. B., West Virginia University, 1946	Charleston
Angelina Guido A. B., West Virginia University, 1945	Morgantown
James Wesley Hendrick	Keithville, La.
Earle Avery Herbert	Forty Fort, Pa.
George Hoylman B. S., West Virginia Wesleyan College, 1936 M. S., West Virginia University, 1941	Buckhannon
Harold Oliver Kamons A. B., West Virginia University, 1945	Parkersburg
Morton Kurtz	New York, N. Y.
Guy Hobert Michael, Jr. A. B., West Virginia University, 1946	Parsons
William Bigbie Moncure	Radford, Va.
Martha Hyre Pelletier A. B., Marietta College, 1939	Charleston
Edward Lowell Pinney, Jr.	Dixie
Harry Wampole Reinstine	Jacksonville, Fla.
Laurella June Ritchie A. B., West Virginia University, 1945	Ravenswood
Donald Gabriel Siegel	Chicago, Ill.
Wallace Cornelius Stout	Delta, Ohio
Julius Varga	New York, N. Y.
David Harold Williams	Cleveland, Ohio

BACHELOR OF SCIENCE (Medical Technology)

Jean Marie Brand . . . . . Morgantown
Betty Stonestreet Gilmore . . . . . Charleston
Eleanor Joyce Stokes . . . . . Hinton

BACHELOR OF LAWS

George Merle Amos, Jr. . . . . Fairmont
A. B., West Virginia University, 1940
Virginia Mae Brown . . . . . Pliny
A. B., West Virginia University, 1945
**Frank Lee Campbell . . . . . Wheeling
A. B., West Virginia University, 1941
**Dayton C. Casto, Jr. . . . . Huntington
A. B., Marshall College, 1939
Delford Lee Cottrill, Jr. . . . . Wayne
A. B., West Virginia University, 1941
**Edward Israel Eiland . . . . . Logan
A. B., West Virginia University, 1940
**Avon Lockard Elder . . . . . Thursday
A. B. in Ed., Glenville State Teachers College, 1937
*Claude Earl Goodwin, Jr. . . . . Clarksburg
A. B., West Virginia Wesleyan College, 1942
Josephine Hawker . . . . . Shinnston
A. B., West Virginia University, 1945
**David Dale Johnson, Jr. . . . . Charleston
A. B., West Virginia University, 1941
Milton Sidney Koslow . . . . . Northfork
A. B., West Virginia University, 1941
Patrick Francis McGucken . . . . . Bancroft
A. B., Morris Harvey College, 1945
William Casey Marland . . . . . Glen Rogers
A. B., University of Alabama, 1940
Kenneth Fay Moran . . . . . Fairmont
*John Thomas Morgan . . . . . Mount Hope
A. B., West Virginia University, 1942
Robert A. Parrish . . . . . Spencer
A. B., West Virginia University, 1940
William Ira Powell . . . . . Romney
A. B., West Virginia University, 1941
Howard William Samson . . . . . Morgantown
A. B., West Virginia University, 1941
**Kenneth Jackson Vance . . . . . Morgantown
A. B., West Virginia University, 1938
Harvey Edwin Weiner . . . . . Logan
B. A., Ohio State University, 1943

BACHELOR OF SCIENCE IN CHEMICAL ENGINEERING

**William Albert Boughner . . . . . Mannington
Thomas Miller Clapham . . . . . Martinsburg
John H. Cline . . . . . Chester
**Charles Evans, Jr. . . . . Morgantown
John Henry Faber . . . . . Elkview
Stanley Farr . . . . . Oak Hill

Ernst Paul Hall	Clarksburg
John Harold McCormick	Hurricane
*Howard Lee McIntyre	Clarksburg
Omer Burwell Meadows	Spencer
Betty Louise Miller	Morgantown
Carl Stanley Miller	Fairmont
Willis Elwood Muldrew	Shinnston
*John Edward Rector	Shinnston
Henry Clark Tolley	Clarksburg
Norman Wallace, Jr.	Cumberland, Md.
James Gordon Withers, Jr.	Grafton

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Grover Haynes Bays	Russellville
Robert Walter Pitthan	Ravenswood
**Clarence Luennis Robinson	Elizabeth
Helen Hope Sauerwein Wilson	Morgantown
Nathan Dyer Wilson	Kingwood

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Duane Adams	Elkins
Virgil Irvin Allen	Center Point
Larry Joseph Argiro	Fairmont
George John Batlas	Morgantown
**Alfred Richard Benvenuto	Morgantown
Clarence Corder Bragg	Clarksburg
*John Mason Carpenter	Fairmont
Charles Clarence Cyphert	Sabraton
Frank William Deegan	Huntington
Bernard Hayes Flood	New York, N. Y.
William Herman Hartwig	Niagara Falls, N. Y.
**Albert Homer Hix	Charleston
John Edward Moran	Parkersburg
**Zeno Neri	Masontown, Pa.
Louis Pasculle	Morgantown
**Sam Pellerite	Fairmont
**Harvey Nixon Rexroad	Charleston
Jack Elvin Roomy	Logan
Angelo Sepe	Providence, R. I.
**George Robert Stockdale	Morgantown
Vernon Eldridge Toothman	Clarksburg

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

*Emilio Allegrini	Wheeling
Garland Arnold	Davis
Harry Franklin Bowen	Fairmont

Jack Brannan . . . . . Morgantown
Joseph Milroy Brown . . . . . Oak Hill
B. S. (Mechanical Engineering Electives), West Virginia University 1946
James Maxel Butcher . . . . . Swandale
Henry Clay Callihan . . . . . Williamson
William Edward Conturo . . . . . Fairmont
LeRoy Shaw Cunningham . . . . . Triadelphia
Gino DePaolis . . . . . Uniontown, Pa.
**Wallace Ronald Dodge . . . . . Morgantown
Rush E. Elkins . . . . . Man
Frank McChesney Flanigan . . . . . Kermit
David Robert Friant . . . . . Morgantown
William Ray Goff . . . . . Charleston
Werner August Grimpe . . . . . Wheeling
Alfred Rannels Johnson . . . . . Dunbar
Earle Cochran King . . . . . Wheeling
John Milton Lowdermilk . . . . . Clarksburg
James Albert Nunley . . . . . Montgomery
Mansel Edward Orell . . . . . Bethesda, Ohio
Gerald Guy Pase . . . . . Thomas
*Guy Carlton Shafer . . . . . Albright
Joseph Rush Williams . . . . . Vivian

BACHELOR OF SCIENCE (Chemical Engineering Electives)

Robert Stanley Jacobson . . . . . Morgantown

BACHELOR OF SCIENCE (Electrical Engineering Electives)

**George Robert Stockdale . . . . . Morgantown

BACHELOR OF SCIENCE (Mechanical Engineering Electives)

*Joseph Milroy Brown . . . . . Oak Hill

BACHELOR OF SCIENCE IN AGRICULTURE

**William Archer, Jr. . . . . Elm Grove
**Joe Paul Bail . . . . . Morris
John S. Baker . . . . . Sweet Springs
George Richard Bauwin . . . . . Tarentum, Pa.
Griffin Wood Boggess . . . . . Lumberport
*John Ryan Carpenter . . . . . Fairmont
James Worth Carr . . . . . Mill Creek
Arnold Alvin Casto . . . . . Fairplain
John Hughes Conley . . . . . Reedy
Harold Smith Criner . . . . . Sanoma
Nelson Theodore Dailey . . . . . Charles Town
**James Howard Dorsey . . . . . Summersville
Joseph Clarence Emch . . . . . New Martinsville

Frank Wintford Glover . . . . . Herndon
Clifford Thomas Goff . . . . . Harrisville
Edward Campbell Grose . . . . . Sago
Betty Jean Ashburn Gum . . . . . Reedsville
Samuel Monroe Gwinn . . . . . Lockbridge
Philip White Hall . . . . . Valley Chapel
*Aves Cleo Holpp . . . . . Vienna
Donald Aubry Hutchison . . . . . Ravenswood
Montgomery Walker Jacob . . . . . Wellsburg
Eugene Orr Jones . . . . . Enterprise
A. B. in Ed., Fairmont State Teachers College, 1942
**Lester Glenn Kyle . . . . . Morgantown
Denzil Arty Liston . . . . . Fenwick
George Samuel Mullett . . . . . New Martinsville
Paul Emmet Nesselroad . . . . . Sherman
Guy Sheridan Parsons . . . . . Ripley
William Alvin Porterfield . . . . . Gap Mills
**Thaddeus McClellan Pritt . . . . . Elkins
Cliff Griffith Riddle . . . . . Cairo
*George Hillis Rogers . . . . . Morgantown
John Raymond Scott . . . . . Morgantown
**Roy Kenneth Simons . . . . . Kincheloe
Otha Eugene Smith . . . . . West Union
Raymond Earl Spencer . . . . . Renick
Everett Bruce Stalnaker, Jr. . . . . Monterville
**Henry Richard Sterle . . . . . Uniontown, Pa.
**Willie Harrison Strader, Jr. . . . . Folsom
Richard Rex Tatterson . . . . . Fairmont
Gerald Wayne Toothman . . . . . Harrisville
James Edward Walker . . . . . Spencer
Adrian Kyle Wells . . . . . Mooresville
*William Sunday Winfrey . . . . . Princeton
Waverly Alexander Winter . . . . . Saint Albans
Everett Lincoln Wolfe . . . . . Kingwood

BACHELOR OF SCIENCE (Agricultural Science)

Andrew Colin McClung . . . . . Martinsburg

BACHELOR OF SCIENCE IN FORESTRY

Harry Henderson Bartels . . . . . Wheeling
**William John Bozett, Jr. . . . . Parma, Ohio
**Jesse Franklin Clovis . . . . . Morgantown
Charles William Dorsey . . . . . Fowler Knob
Raymond Starcher Lockwood . . . . . Grafton
John Anthony Marra . . . . . Morgantown
Donnally Hamilton Morris, Jr. . . . . Charleston
Edward Raymond O'Neill, Jr. . . . . Schenectady, N. Y.

Eugene Shoulders	French Creek
**Earl Paul Stephens	Canton, Ohio
Benjamin Boreman Stout	Hogsett
**Fay Melvin Straight	Grant Town
**Dallas George Wilfong, Jr.	Hamlin
Carl Anthony Wilhelm	Fairview

BACHELOR OF SCIENCE IN HOME ECONOMICS

*Betty Jane Babb	Maysville
Maxine Bennett	Elkins
Constance Ann Bevans	Paw Paw
*Dorothy Rae Bishop	Elkins
Emma Lou Broadwater	Mannington
Mary L. Priest Browning	Morgantown
*Doris Hood Buseman	Morgantown
**Margaret Ann Chambers	Wellsburg
Helen Jewell Channell	Huttonsville
Mabel Elizabeth Clower	Petersburg
Virginia Mae Conklin	Waynesburg, Pa.
**Evangeline Constantine	Morgantown
Margaret Lucile Crane	Albright
Reba Geraldine Drake	Nitro
**Bernice Mae Fox	Bridgeport
Sarah Elizabeth Gates	Sistersville
Urilla Jane Hashinger	Morgantown
Nova Jean Haynes	Morgantown
Geraldine Mayle	Morgantown
**Eloise Morgan Milne	Albright
Arlene Cutright Norris	Salem
Frances Anne Pinson	Williamson
Dortha Jean Ramsey	Clarksburg
Clarice Ruth Ridenour	Newburg
Phoebe Ryan Schubert	Ryan
**Catherine Chico Sellaro	Morgantown
Thelma Maxine Shinaberry	Dunmore
Margaret Evelyn Smith	Marlinton
Joanne Louise Steiner	West Newton, Pa.
Sue Marie Theis	Keyser
Genevieve Hester Thomas	Brandonville
Virginia Maxine Tucker	Mannington
Dorothea Mae Vandevender	Elkins
Linnie Joan Vickers	Elkview
Mary Alice Wagner	Glenville
Betty Jean White	West Newton, Pa.
Joana Helen White	Toledo, Ohio
Grace Virginia Williams	Marlinton
Mary Madeline Winter	Bridgeport

**Mary Elizabeth Wolfe	Morgantown
Elma Jean Woofter	Troy

BACHELOR OF SCIENCE IN EDUCATION

Anna Marguerite Adkins	Montgomery
*Jean Emily Baughman	Philippi
*Elnora Cale Benson	Terra Alta
Mary Virginia Biafora	Morgantown
Bryce Douglas Bigler, Jr.	Morgantown
Betty June Booth	Morgantown
*Margaret Regina Broderick	Terra Alta
*Betty Lou Caloccia	Dawmont
Clara Christine Caravasos	Morgantown
*Clarence Riley Carte	Beckley
*Betty Shanklin Casto	Charleston
*Garnet Marie Collier	Smithfield, Pa.
**Marjorie Eileen Crane	Albright
Mary Jane Crutchfield	Sutton
**Mary Frances Cunningham	Cairo
*Mary Louise Farley	Beckley
Eleanor Virginia Fragale	Clarksburg
Betty Jane Curry Haan	Morgantown
Olan Heuston Hall	Proctor
Fred Eberly Hamilton	Weston
Frank Stephenson Hewitt	Freeman
Grayson Dale Holmes	Moatsville
Lycena Mae Hughart	Rupert
Marilyn Shirley Jones	Follansbee
Denver Hancel Knapp	Buffalo
**Lorena Auer Leist	War
**Joanne Clark McMillion	Morgantown
John Gilkeson McNeill	Moorefield
*Florence Lombard Merow	Follansbee
Mary Anne Minnich	Keyser
Dolly Olivia Nesselrodt	Franklin
William Harold Parcell	Elkview
Catherine Virginia Pasculle	Morgantown
*Gelma Anne Pealer	Weirton
*Elizabeth Ann Prather	Clarksburg
Doris June Protzman	Morgantown
*Harold Frederick Roby	Petersburg
*Edna Leone Smith	Kingwood
Eleanor Joan Smith	Philippi
James William Twigg	Green Spring
*Mary Lee Wolfe	Kingwood
Mary Josephine Yedlosky	Morgantown
Thelma Elizabeth Zimmerman	West Brownsville, Pa.

BACHELOR OF SCIENCE IN PHARMACY

William Jefferies Dixon	Carlisle
**John Harold Elsey	Clarksburg
Betty Jane Moore	Vanderbilt, Pa.
Martha Good Robinson	Wellsburg
**Maurice Lattimer Simonton	Saint Marys
Stephen Blackmore Thompson	Spencer
John Wesley Vines	Hinton
*G. Chester Bromley Westmoreland	Clarksburg

BACHELOR OF MUSIC IN PUBLIC SCHOOL MUSIC

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**Verna Josephine Berry	Morgantown
Betty Jo Clingman	Kayford
Mary Ellen Coffroth	Morgantown
Jane Abbott Hazeltine	Elkins
Regina Eleanor Holliday	Omar
Cecelia Lee Humes	Follansbee
Helen Carole Paxton	Widen
*John Rohac Pestun, Jr.	Morgantown
Walter Sturgis Rhodes, Jr.	Point Marion, Pa.
*Marian Bernice Rohr	Charleston
*Virginia Dowdy Rooney	Columbus, Ohio
Robert Earl Thomas	Hundred
Frances Fleshman Wilson	Charleston

BACHELOR OF MUSIC IN PIANO

Jeanne Virginia Anderson	Morgantown

BACHELOR OF MUSIC IN VIOLIN

Charles Jarvis Hinkle	Fairmont
John George Papandreas	Sabraton

BACHELOR OF SCIENCE IN ENGINEERING OF MINES

Roy Wilder Biddle	Charleston
Robert Clair Brand	Morgantown
Robert Gene Harris	Weston
*William Carl Kerns	Bridgeport
*John Henry Kime	Moundsville
Fred Douglas Leckie	Columbus, Ohio
Richard Wilberforce Lee	Morgantown
Mack Harrice Shumate	Baileysville
John William Straton	Charleston

BACHELOR OF SCIENCE IN PHYSICAL EDUCATION

Louvada Jean Armstrong	Flemington
Margaret Lee Benson	Morgantown
Richard Blair Beymer	Sandyville
‡Patricia Shellenberger Carew	Westfield, N. J.
Ann Elizabeth Cochran	Glasgow
‡**Martha Marsh Cowell	Morgantown
‡Helen Lucy Cunningham	McAlpin
Jeanette Marie Daniel	Mannington
Catherine Dudley deGruyter	Charleston
Pauline Helen Francis	Mannington
Alice Elizabeth Gribbin	Rachel
Anne Wilkinson Halliwell	Montgomery
*Margaret Lucille Hays	Mullens
Colleen Marie Jacquet	Morgantown
Henry Coleman Joy	Saint Marys
Peggy Marie Little	Morgantown
William Edward Long	Mount Morris, Pa.
Virginia Arnold Lyall	Mona
Eva Mae McCormick	Logan
‡**Edward W. Ossoski	Beaver Falls, Pa.
Virginia Marie Perry	Morgantown
*Walter Lee Pike	Algoma
Eleanor Clark Rodgers	Sinks Grove
*Anna Florence Shuman	Morgantown
Loy Addison Wagoner	Springfield
*Verlin Eugene Walden	Morgantown
Dorothy Lorraine Weiford	Marlinton
**Marie Dodd White	Morgantown
Joan Barr Williams	New Martinsville
**Ann Bowling Yeager	Kingston
Mary Patricia Yeager	Kingston
June Zakutansky	Weirton

BACHELOR OF SCIENCE IN JOURNALISM

Charles Howard Blattner	Camden, N. J.
Shannon Kathleen Ferrell	Catawba
Juanita Giffen	Charleston
Clement J. Hamilton	Morgantown
Doris Elaine Kutz	Allentown, Pa.
**Phil Carmela Mazzella	Charleston
Robert Harrison Modlin	Sistersville
Edward Kirby Perrow, Jr.	Charleston
Robert Clarence Pierson, Jr.	Clay
Robert Haynes Powell, Jr.	Wilcoe
Elizabeth Jane Skinner	Charles Town

Brentz Franklin Thompson . . . . . Richwood
Eloise Lee Twigg . . . . . Keyser
Tam Park Vannoy . . . . . Welch
Tristan V. Williams . . . . . Morgantown
Bobbie Jane Woods . . . . . Emmitsburg, Md.

MASTER OF ARTS

*Angelene Helen Amato . . . Education . . . . Pemberton
B. S. Ed., West Virginia University, 1941
Florence Carden Amos . . . English . . . . . Fairmont
A. B. in Ed., Fairmont State Teachers College, 1939
Junior Paul Andrick . . . . Education . . . . Philippi
A. B. in Ed., Fairmont State Teachers College, 1939
James David Bailey . . . . Economics . . . . Bluefield
B. S. (Bus. Ad.), West Virginia University, 1946
**Jessie Lee Bailey . . . . . Education . . . . Morgantown
B. S. Ed., West Virginia University, 1935
Edwin Marshall Bartrug . . . Education . . . . Saint Albans
B. S. Ed., West Virginia University, 1934
Frank Albert Black . . . . . Education . . . . Charleston
A. B., Amherst College, 1934
**Raymond L. Bledsoe . . . . Education . . . . Webster Springs
A. B., University of Alabama, 1931
Thomas Munn Bole, Jr. . . . French . . . . . Ben Avon, Pa.
A. B., University of Pittsburgh, 1943
Thomas Arnold Bolyard . . . Education . . . . Morgantown
A. B., Broaddus College, 1927
*Winifred Viquesney Booth . . Education . . . . Morgantown
B. S. Ed., West Virginia University, 1932
*Hugh Bosely . . . . . Education . . . . Montgomery
B. S., West Virginia Institute of Technology, 1943
Glenn Horner Bowlby . . . . History . . . . . Morgantown
B. S., Juniata College, 1941
*John Alexander Bradford . . Education . . . . Helen
A. B., Concord State Teachers College, 1934
Selden Winford Brannon . . History . . . . . Romney
A. B. in Ed., Glenville State Teachers College, 1931
*Edna Mae Burdette . . . . . Education . . . . Leon
A. B., West Virginia University, 1934
*Robert Wesley Calvert . . . Education . . . . Kingwood
A. B. in Ed., Fairmont State Teachers College, 1940
**Earl Lambert Carpenter . . . Education . . . . Fairmont
A. B. in Ed., Fairmont State Teachers College, 1940
*Hugh Edwin Cavendish . . . Education . . . . Hico
A. B., Glenville State Teachers College, 1939
*Elmus Wilton Cooper . . . . Education . . . . Williamsburg
B. S., New River State College, 1937
Hiram Leonard Cox . . . . Economics . . . . Letter Gap
A. B., Glenville State College, 1946
*Grace Saunders Craddock . . Education . . . . Nitro
A. B. in Ed., Marshall College, 1940
*Charles Scott Creasy . . . . Education . . . . Charleston
A. B., Glenville State Teachers College, 1940
George Curtis Cubbon . . . Education . . . . Charleston
B. S. P. E., West Virginia University, 1935
*Kenneth Claud Daugherty . . Education . . . . Grafton
A. B. in Ed., Fairmont State Teachers College, 1937

Oreta Holbert Dawson . . . English . . . . . Clarksburg
A. B., Glenville State Teachers College, 1935

*Lester Allen Dent . . . . . Education . . . . Ronceverte
A. B. El. Ed., Salem College, 1936

**Abel Franklin DeWitt . . . . Education . . . . Morgantown
B. S. Ed., West Virginia University, 1939

*Madge Lois Dick . . . . . Education . . . . Charleston
B. S. El. Ed., Morris Harvey College, 1941

*Frank Parfitt Donaldson . . . Education . . . . Morgantown
A. B. in Ed., Fairmont State Teachers College, 1940

**Marion Downs . . . . . Education . . . . Morgantown
A. B., Fairmont State Teachers College, 1932

Galen Franklin Duling . . . Education . . . . Petersburg
A. B. in Ed., Fairmont State College, 1946

*Ruth Dunn . . . . . Education . . . . Richwood
A. B., West Virginia University, 1938

*Joseph William Ervin . . . . Education . . . . Elkins
A. B., Glenville State Teachers College, 1934

*Madalene Braham Everly . . Education . . . . Morgantown
A. B. in Ed., Fairmont State Teachers College, 1938

Manford Grover Flowers . . History . . . . . Morgantown
A. B., Morris Harvey College, 1928

*Vernon Emilia Foltz . . . . Education . . . . Charleston
B. S. Sec. Ed., Morris Harvey College, 1944

*Edwin Jackson Frederick . . Education . . . . Shinnston
A. B. in Ed., Fairmont State Teachers College, 1938

*Hazel Shrader Glass . . . . Education . . . . Petersburg
A. B. El. Ed., Shepherd State Teachers College, 1941

*Edith Andrews Glenn . . . . Education . . . . Morgantown
A. B., Fairmont State Teachers College, 1937

**Lloyd L. Gump . . . . . Education . . . . Fairmont
A. B. in Ed., Fairmont State Teachers College, 1931

*John Wade Gwinn . . . . . Education . . . . Green Sulphur Springs
A. B., Concord State Teachers College, 1941

*Clyde Branson Halterman . . Education . . . . Lost City
A. B. El. Ed., Shepherd State Teachers College, 1942

*Walter Edwin Hamilton . . . Education . . . . Wellsburg
A. B., West Virginia University, 1935

*Buddy Lee Harvey . . . . . Education . . . . Egeria
A. B., Concord State Teachers College, 1938

*Ruth Wheeler Hatfield . . . English . . . . . Morgantown
A. B., West Virginia University, 1923

Helen Maxine Heater . . . . Education . . . . Weston
A. B., Glenville State Teachers College, 1941

*Mary McMicken Holbert . . . Education . . . . Salem
A. B., Salem College, 1939

*Helen Dummitt Holsteine . . Education . . . . Beckley
A. B. in Ed., Concord College, 1943

**James Gay Jones . . . . . History . . . . . Spencer
A. B., Glenville State Teachers College, 1936

*Ethel Gertrude Keyser . . . Education . . . . Beckley
A. B., West Virginia University, 1921

*Eva Margaret Keyser . . . . Education . . . . Beckley
A. B., Cornell College, 1920

**Margaret McNemar King . . English . . . . . Logan
A. B., West Virginia University, 1938

*Charles Franklin Lasure . . . Education . . . . Knob Fork
A. B. in Ed., West Liberty State Teachers College, 1939

Leonard Bell Legg . . . . . Education . . . . Charleston
A. B. El. Ed., Concord State Teachers College, 1937

**Will Hal Lewis . . . . . Education . . . . Morgantown
A. B., West Virginia University, 1937
B. S. Ed., West Virginia University, 1940

*Ruth Andrews Liston . . . . Education . . . . Morgantown
A. B., College of Wooster, 1923

*Joseph Lee Logan, Sr. . . . Education . . . . Coral Gables, Fla.
A. B. in Ed., Concord State Teachers College, 1939

*Virginia Grogan Logan . . . Education . . . . Coral Gables, Fla.
A. B., Concord State Teachers College, 1938

Lee Ward McClain . . . . . Education . . . . Rock Cave
A. B. in Ed., Glenville State Teachers College, 1933

Charles Kinsley McWhorter . Political Science . Lewisburg
A. B., West Virginia University, 1943

*Eulalia Francisco Magann . . Education . . . . Bluefield
A. B., Marshall College, 1936

*Wendell Caldwell Mathias . . Education . . . . Mathias
A. B. in Ed., Shepherd State Teachers College, 1933

*Grace Irene Maust . . . . . English . . . . . Clifton Mills
A. B., West Virginia University 1928

**Rose Rubick Maxwell . . . . Education . . . . Morgantown
A. B. in Ed., Fairmont State Teachers College, 1938

*Jason Jay Meadows . . . . Education . . . . Montrose
A. B. in Ed., Glenville State Teachers College, 1936

*Albany Milam . . . . . Education . . . . Glen Daniel
A. B. in Ed., Concord State Teachers College, 1941

*Clayton Montgomery, Jr. . . English . . . . . Morgantown
A. B., West Virginia Institute of Technology, 1944

**James Victor Morris . . . . Education . . . . Enterprise
A. B., Fairmont State Teachers College, 1936

*Mabel Margerete Nichols . . Education . . . . Diana
A. B. El. Ed., Glenville State Teachers College, 1941

Harold W. Nicholson . . . . Education . . . . Salem
A. B., Salem College, 1927

*Carrie Lucas Parker . . . . Education . . . . Beckley
A. B., Lynchburg College, 1922

Clyde Clayton Phillips . . . Education . . . . Belington
A. B. in Ed., Alderson-Broaddus College 1940

*Albert Ellsworth Post . . . . Education . . . . Fairmont
A. B., Fairmont State Teachers College, 1941

*William Keller Power . . . . Education . . . . Smithfield, Pa.
B. S., Washington and Jefferson College, 1937

*Blenda Lena Proudfoot . . . Education . . . . Morgantown
A. B., West Virginia University, 1934

*Margaret Ruth Quinn . . . . Education . . . . Charleston
B. S. El. Ed., Morris Harvey College, 1941

Victoria Kovach Radford . . Education . . . . Morgantown
A. B. in Ed., Marshall College, 1939

*Harry James Ramsay . . . . Education . . . . Munhall, Pa.
A. B., West Virginia University, 1928

*Jackson Kimmel Randolph . . Education . . . . West Union
A. B., Salem College, 1939

*George Henson Rogers . . . Education . . . . Weston
A. B., West Virginia Wesleyan College, 1929

*Harold Edwin Shaffer . . . . Education . . . . Bayard
B. S. Ed., West Virginia University, 1932

*Velma Dillon Shumate . . . Education . . . . Glen Daniel
A. B. in Ed., Concord State Teachers College, 1940

*Kelly Eugene Shutt . . . . Education . . . . Princeton
A. B., Concord State Teachers College, 1937

Pete Simonette . . . . . Spanish . . . . Reynoldsville
A. B., Salem College, 1942
*Otis Ralph Snider . . . . Education . . . . Fairmont
A. B., Fairmont State Normal School, 1927
*John Francis Snyder . . . . Education . . . . Garrett, Pa.
B. S., Franklin and Marshall College, 1938
Joseph Porter Sollars . . . . Education . . . . Oakland, Md.
B. S., Frostburg State Teachers College, 1942
Lewis James Sullivan . . . . Education . . . . Richwood
A. B., Glenville State Teachers College, 1942
*Bernard Lee Summers . . . Education . . . . Morgantown
A. B., West Virginia University, 1940
*Darrel Harrison William
Burl Tallman . . . . . Political Science . Ridgeley
A. B., West Virginia University, 1946
*Louis Edward Teets . . . . Education . . . . Elkview
A. B. in Ed., Glenville State Teachers College, 1937
*Pearl Thomas . . . . . Education . . . . Grafton
A. B., Fairmont State Teachers College, 1939
**Jane Fanning Thompson . . . Education . . . . Montgomery
A. B. in Ed., Concord State Teachers College, 1934
**Saul Viener . . . . . History . . . . . Charles Town
A. B., Shepherd State Teachers College, 1942
*Francis C. Vincent . . . . . Education . . . . Charleston
A. B. in Ed., Marshall College, 1934
*Dorothy Marie Watson . . . Education . . . . Tunnelton
B. S. Bus. Ad., Drexel Institute, 1937
*Jewell Marie Webb . . . . . Education . . . . Charleston
B. S., Morris Harvey College, 1944
*Bonnie Eakle Westfall . . . Education . . . . South Charleston
A. B., Glenville State Teachers College, 1926
*Daniel Fowler Westfall . . . Education . . . . Charleston
B. S., West Virginia Wesleyan College, 1923
*Charles Wharton . . . . . Education . . . Dunbar
B. S. El. Ed., Morris Harvey College, 1938
*Evert Fillmore Whitener . . History . . . . . Clarksburg
A. B., West Virginia University, 1929
*Maurice Kenneth Wilcox . . Education . . . . West Union
A. B., West Virginia University, 1924
Arnett Mann Wilfong . . . . Education . . . . Clarksburg
A. B., West Virginia Wesleyan College, 1941
*Audrey Verl Yoho . . . . . Education . . . . Grafton
A. B., Fairmont State Normal School, 1927

MASTER OF SCIENCE

*Mary Rosamond Allen . . . Physical Education Aurora
A. B., West Virginia University, 1925
Harry Raymond Anderson . . Physical Education Morgantown
B. S. P. E., West Virginia University, 1941
James Franklin Anderson . . Horticulture . . . Morgantown
B. S. Agr., West Virginia University, 1943
John Edward Bailey . . . . Physics . . . . . Wheeling
B. S. E. E., West Virginia University, 1940
John Minge Bolling . . . . Chemistry . . . . Huntsville, Ala.
B. S. (Chem.), West Virginia University, 1946
*George Armstrong Byrer . . Physical Education Weston
A. B. in Ed., Fairmont State Teachers College, 1938
*Lawrence Stanley Cavendish . Vocational Agr. . . Ripley
B. S. Agr., West Virginia University, 1940

*Hallie Mae Shupe Christian	Physical Education	Princeton
B. S. P. E., West Virginia University, 1937		
William Douglas Creasy	Botany	Calvin
B. S., West Virginia Institute of Technology, 1941		
*Claude Emerson DeHaven	Zoology	Martinsburg
A. B., Shepherd State Teachers College, 1936		
*Ruth DeEtta Eaton	Physical Education	Waynesburg, Pa.
A. B., Waynesburg College, 1939		
Franklin Clay Ellis	Physical Education	Buckhannon
B. S., West Virginia Wesleyan College, 1943		
James Dovener Faber	Zoology	Morgantown
A. B., West Virginia University, 1942		
*Joss Willard Falkenstine	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1939		
Stanford Newton Fertig	Agronomy	Marlinton
B. S. Agr., West Virginia University, 1946		
Vernon Jacob Fisher	Horticulture	Charleston
B. S. Agr., West Virginia University, 1943		
John Patrick Foley	Physical Education	Westernport, Md.
B. S., Davis and Elkins College, 1940		
Emil Eugene Fowler	Zoology	Morgantown
A. B., West Virginia University, 1946		
George Reinicker Gist, Jr.	Agronomy	Wellsburg
B. S. Agr., West Virginia University, 1942		
Myron Herbert Halpern	Zoology	New York, N. Y.
A. B., Indiana University, 1944		
Jacob Austin Harper	Physical Education	Fairmont
A. B., Fairmont State Teachers College, 1941		
*Robert James Heckert	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1941		
*Eugene Joseph Hester	Physical Education	Sistersville
B. S. P. E., West Virginia University, 1936		
Helen Gregg Hockenberry	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1939		
**George J. Jacobs	Zoology	New York, N. Y.
B. A., University of Mississippi, 1940		
Kenneth Robert Johnson	Dairy Husbandry	Lewisburg
B. S. Agr., West Virginia University, 1943		
Quellen McGuire Keith	Animal Husbandry	Spencer
B. S., Hampden-Sydney College, 1943		
Cecil Edward Lacy	Physical Education	Mullens
A. B., New River State College, 1938		
*Earle Lewis Lancaster	Physical Education	Weston
B. S. P. E., West Virginia University, 1939		
Mary Elizabeth Lang	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1941		
*Gordon Leon Leeson	Physical Education	Ripley
B. S. P. E., West Virginia University, 1939		
Frank Joseph Liberatore	Physics	Morgantown
B. S. E. E., West Virginia University, 1944		
*William Allan Lunk	Zoology	Fairmont
A. B., West Virginia University, 1941		
John Robert McCoy, Jr.	Zoology	Elm Grove
A. B., West Virginia University, 1944		
Samuel Leslie McIlveen	Zoology	Armbrust, Pa.
A. B., Tusculum College, 1937		
*Robert Gayle McQuain	Zoology	Walkersville
A. B., West Virginia University, 1946		

**Bernard Stephen Martof . . .	Zoology	Waynesburg, Pa.
B. S., Waynesburg College, 1942		
*William Earl Michael	Zoology	Mannington
B. S. Ed., Alderson-Broaddus College, 1938		
William Edmund Miller . . .	Botany	Fairview
A. B., Fairmont State Teachers College, 1936		
*John Wesley Mowrey, Jr. . .	Physical Education	Sutton
A. B. in Ed., Glenville State Teachers College, 1938		
*Fred Nebera	Physical Education	Grant Town
B. S. P. E., West Virginia University, 1939		
Hobert Kenneth Nicholson . .	Vocational Agr. . .	Avon
B. S. Agr., West Virginia University, 1946		
*Violet Josephine Phillips . .	Zoology	Hansford
B. S., West Virginia Institute of Technology, 1942		
*Domenic Robert Pisegna . . .	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1942		
Samuel Noel Postlethwait . .	Botany	Morgantown
A. B., Fairmont State Teachers College, 1940		
*Aaron Henry Rapking, Jr. . .	Botany	Lost Creek
B. S., West Virginia Wesleyan College, 1936		
Neil Elbon Richards	Physical Education	Belington
A. B., Davis and Elkins College, 1941		
Mary Alice Ryan	Bacteriology . . .	Ryan
A. B., West Virginia University, 1944		
Rigsby Caldwell Satterfield . .	Physical Education	Winston-Salem, N. C.
A. B., Florida Southern College, 1931		
Paul Edward Shea	Physical Education	East Liverpool, Ohio
B. S., Saint Vincent College, 1940		
*Gene Hope Smith	Zoology	Morgantown
A. B., West Virginia University, 1945		
Mary Ashworth Smith . . .	Bacteriology . . .	Beckley
A. B., West Virginia University, 1945		
**Rose Pilegge Smith	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1939		
Robert Clark Steele	Zoology	Morgantown
A. B., West Virginia University, 1943		
*Frank Phillip Sterle	Physical Education	Uniontown, Pa.
B. S. P. E., West Virginia University, 1935		
Willie Harrison Strader, Jr. .	Vocational Agr. . .	Folsom
B. S. Agr., West Virginia University, 1947		
Robert Earl Strosnider . . .	Genetics	Blacksville
B. S. Agr., West Virginia University, 1943		
Lewis Wayne Thorne	Physical Education	Fairmont
B. S. P. E., West Virginia University, 1943		
John Tennant Victor	Physical Education	Barrackville
A. B., Fairmont State Teachers College, 1942		
Mary Jane Ward	Physical Education	Salem
A. B., Salem College, 1943		
*Williard Orphus Wolfe . . .	Physical Education	Terra Alta
B. S. P. E., West Virginia University, 1936		
Woodrow Wilson Wyant . . .	Animal Husbandry .	Talcott
B. S. Agr., West Virginia University, 1942		
*Charles Peter Yost	Physical Education	Berkeley Springs
B. S. P. E., West Virginia University, 1943		
*Joseph Felix Zaleski	Physical Education	Morgantown
B. S. P. E., West Virginia University, 1936		
**Charles Daub Ziel	Zoology	Crafton, Pa.
B. S., University of Pittsburgh, 1945		

MASTER OF SCIENCE IN CHEMICAL ENGINEERING

John Joseph D'Amico . . . . . Wheeling
B. S. Ch. E., West Virginia University, 1938

Robert Paul Haden . . . . . Morgantown
B. S. Ch. E., West Virginia University, 1943

James Albert Kapnicky . . . . . Morgantown
B. S. Ch. E., West Virginia University, 1943

*Aaron Rose . . . . . Morgantown
B. S. Ch. E., West Virginia University, 1940

MASTER OF SCIENCE (Home Economics Education)

*Lilyan King Galbraith . . . . . Morgantown
B. S. H. E., West Virginia University, 1927

Mary Rose Taylor Jones . . . . . Morgantown
B. S. H. E., West Virginia University, 1935

Mary Jeannette Schultz Lockard . . . . . Morgantown
B. S. H. E., West Virginia University, 1924

*Verda Blanche McDonald . . . . . Morgantown
A. B., West Virginia University, 1921

*Jeanne Burke Scott . . . . . Clarksburg
A. B. in Ed., Fairmont State Teachers College, 1941

*Arvenia Elizabeth Shutt . . . . . Princeton
A. B. in Ed., Marshall College, 1940

**Anna Richards Ward . . . . . Princeton
A. B. in Ed., Concord State Teachers College, 1940

MASTER OF MUSIC

Mary Jane Wasmuth . . . . Public School Music Glen Dale
B. Mus. in Public School Music, West Virginia University, 1939

PROFESSIONAL CERTIFICATE OF SOCIAL WORK

Mary Fayne Acker . . . . . Charleston
B. S. (Soc. Wk.), West Virginia University, 1947

Malmarie Beveridge . . . . . Morgantown
B. S. (Soc. Wk.), West Virginia University, 1946

Dorothy Mae Brookover . . . . . Rivesville
A. B., Fairmont State Teachers College, 1939

Ruth Ann Fundis . . . . . Wheeling
B. S. (Soc. Wk.), West Virginia University, 1946

Philip Acber Guseman . . . . . Dellslow
A. B., West Virginia University, 1941

Eloise May Hinkle . . . . . Webster Springs
B. S. (Soc. Wk.), West Virginia University, 1946

Edna Virginia Hupp . . . . . Glenville
A. B., Glenville State College, 1945

Vivian Bruce Jenkins . . . . . Parkersburg
A. B., West Virginia Wesleyan College, 1936

Virginia Sellers Lawrence . . . . . Morgantown
A. B., West Virginia University, 1930

Phyllis Davies McClure . . . . . Morgantown
A. B., West Virginia University, 1945

Irma Bernarda Martorell Seraballs . . . . . Santurce, P. R.
B. A., University of Puerto Rico, 1945

Thomas George Pinnock . . . . . Morgantown
A. B., West Virginia University, 1942

Margaret Eleanor Shaffer . . . . . Madison
B. S. (Soc. Wk.), West Virginia University, 1944

**Viola Woods Taylor . . . . . Morgantown
A. B., University of North Dakota, 1933

Carolyn Reed Toothman . . . . . Glenville
B. S. (Soc. Wk.), West Virginia University, 1946

Earl Wilson Wolfe . . . . . Glenville
A. B., Glenville State Teachers College, 1938

DOCTOR OF PHILOSOPHY

William Derrick Barns . . . History . . . . . Uniontown, Pa.
A. B., Pennsylvania State College, 1939
M. A., Pennsylvania State College, 1940
Dissertation: The Granger and Populist Movements in West Virginia, 1873-1914

John Holland Hoback . . . . Chemistry . . . . Huntington
A. B., Marshall College, 1941
M. S., Marshall College, 1942
Dissertation: The Effect of Cellulose on the pH of NaCl and KCl Solutions

**Clario Neal Jimison . . . . Chemical Engineering Huntington
B. S. Ch. E., West Virginia University, 1940
M. S. Ch. E., West Virginia University, 1941
Dissertation: Continuous Esterification in Packed Columns: An Experimental Survey

DEGREES CONFERRED 1870-1947

Bachelor's Degrees

YEAR	A. B.	B. S.	LL. B.	B. S. C. E.	B. S. M. E.	B. S. E. M.	B. S. E. E.	B. S. Ch. E.	B. S. Ind. Ed.	B. S. Agr.	A. B. in Law	Ph. B.	M. D.	D. V.	B. S. H. E.	Ph. C.	Ph. G.	B. Mus.	B. S. Ed.	B. S. Phys. Ed.	B. S. Phar	B. S. For	B. S. Journ.	Totals
1870	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
1871	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2
1872	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
1873	7	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	13
1874	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7
1875	6	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7
1876	3	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	9
1877	7	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	9
1878	5	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
1879	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
1880	2	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
1881	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3
1882	7	2	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	10
1883	9	3	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	17
1884	3	1	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	9
1885	4	3	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	13
1886	5	1	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	13
1887	2	1	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	11
1888	4	....	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	13
1889	9	3	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	19
1890	6	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	12
1891	8	4	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	26
1892	6	2	18	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	30
1893	12	2	11	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	30
1894	8	2	23	5	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	39
1895	10	4	24	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	41
1896	8	3	35	....	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	48
1897	11	2	44	2	2	....	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	66
1898	9	5	18	6	....	....	....	....	....	1	5	1	....	....	....	....	....	....	....	....	....	....	....	45
1899	12	2	40	7	1	....	....	....	....	2	....	2	....	....	....	....	....	....	....	....	....	....	....	66
1900	46	1	9	....	....	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	58
1901	30	....	9	3	....	....	....	....	....	1	2	....	....	....	....	....	....	....	....	....	....	....	....	45
1902	25	....	17	8	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	54
1903	29	1	10	6	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	48
1904	28	....	8	2	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	42
1905	20	2	22	4	3	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	53
1906	18	1	17	9	6	....	....	....	....	1	....	....	3	....	....	....	....	....	....	....	....	....	....	55
1907	32	3	12	14	4	....	....	....	....	2	....	....	8	....	....	....	....	....	....	....	....	....	....	75
1908	20	4	8	6	6	....	....	....	....	....	....	....	7	....	....	....	....	....	....	....	....	....	....	51
1909	27	3	2	15	4	....	....	....	....	1	....	....	4	....	....	....	....	....	....	....	....	....	....	56
1910	27	6	12	7	5	....	....	....	....	....	....	....	1	2	....	....	....	....	....	....	....	....	....	60
1911	27	5	12	6	7	2	....	....	....	3	....	....	4	2	....	....	....	....	....	....	....	....	....	68
1912	27	12	17	9	9	....	....	....	....	4	....	....	6	....	....	....	....	....	....	....	....	....	....	84
1913	28	9	15	3	1	....	2	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	61
1914	28	13	12	4	1	....	5	....	....	12	....	....	1	....	....	....	....	....	....	....	....	....	....	76
1915	35	25	14	8	4	1	5	....	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	102
1916	40	8	9	2	4	1	6	....	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	80
1917	62	9	16	5	2	5	....	....	....	19	....	....	....	....	1	....	1	....	....	....	1	....	....	121
1918	40	8	5	4	4	1	4	....	....	17	....	....	....	....	2	....	....	....	....	....	....	....	....	85
1919	42	11	2	....	1	2	3	....	....	5	....	....	....	....	10	....	....	....	....	....	....	....	....	76
1920	79	22	16	11	2	....	5	....	....	14	....	....	....	....	17	....	1	....	....	....	2	....	....	169
1921	93	29	12	7	5	5	7	2	1	25	....	....	....	....	9	....	3	....	....	....	1	....	....	199
1922	56	48	17	7	5	7	6	3	....	18	....	....	....	....	17	....	10	....	....	....	....	....	....	194
1923	125	47	20	4	8	9	9	4	....	41	....	....	....	....	19	....	8	....	....	....	....	....	....	294
1924	130	43	18	9	8	2	18	7	1	25	....	....	....	....	25	....	11	....	....	....	1	....	....	298
1925	132	53	26	14	3	6	17	6	....	19	....	....	....	....	25	....	6	....	....	....	....	....	....	307
1926	169	58	26	19	5	11	9	4	1	22	....	....	....	....	19	....	5	1	....	....	2	....	....	351
1927	198	55	37	13	7	10	15	7	....	14	....	....	....	....	32	....	1	1	....	....	4	....	....	394
1928	211	48	35	7	3	7	17	4	....	15	....	....	....	....	28	5	....	....	....	....	3	....	....	383
1929	230	49	42	8	7	3	15	5	....	21	....	....	....	....	31	13	....	3	2	....	....	....	....	430
1930	264	42	42	7	2	3	24	9	....	22	....	....	....	....	22	10	....	10	23	1	1	....	....	482
1931	252	42	40	9	4	2	21	7	3	23	....	....	....	....	25	5	....	12	37	6	3	....	....	491
1932	209	54	42	11	7	5	17	6	3	24	....	....	....	....	39	4	....	14	25	17	2	....	....	479
1933	233	52	45	8	7	4	13	12	5	24	....	....	....	....	33	5	....	8	28	21	1	....	....	499
1934	216	48	32	5	5	4	16	10	5	18	....	....	....	....	31	3	....	....	19	26	1	....	....	439
1935	202	54	29	7	9	....	20	14	2	21	....	....	....	....	40	....	....	....	34	22	1	....	....	455
1936	214	43	44	13	8	7	13	26	3	25	....	....	....	....	32	1	....	6	37	25	6	....	....	503
1937	239	23	30	6	5	1	11	21	2	24	....	....	....	....	39	....	....	4	52	14	2	....	....	473
1938	249	17	37	7	10	4	15	19	....	17	....	....	....	....	36	....	....	13	49	20	7	....	....	500
1939	230	24	35	....	....	5	18	21	1	33	....	....	....	....	33	....	....	15	37	33	11	11	....	519
1940	192	30	34	5	19	11	16	31	....	47	....	....	....	....	28	....	....	8	30	29	8	12	14	514
1941	218	57	30	3	13	9	15	29	....	50	....	....	....	....	40	....	....	14	48	28	7	11	15	587
1942	219	53	28	6	19	5	6	24	....	47	....	....	....	....	42	....	....	17	32	15	13	10	16	552
1943	169	54	9	2	9	8	17	23	....	33	....	....	....	....	51	....	....	24	32	18	11	5	12	477
1944	108	57	6	9	11	8	14	17	....	7	....	....	....	....	45	....	....	14	18	12	6	1	11	344
1945	101	58	4	1	6	....	4	3	....	2	....	....	....	....	40	....	....	9	19	7	4	1	8	267
1946	116	83	11	3	7	1	1	5	....	12	....	....	....	....	30	....	....	14	20	10	4	3	9	329
1947	189	123	20	5	24	9	21	17	....	46	....	....	....	....	41	....	....	17	43	32	8	14	16	625
Totals	5855	1547	1279	360	293	158	405	337	27	790	13	3	34	4	882	46	46	126	585	336	110	68	101	13405

Master's Degrees

YEAR	A. M.	M. S.	LL. M.	M. S. Agr	M. S. C. E.	M. S. M. E.	M. S. Ch. E.	M. S. E. M.	M. S. E. E.	M. Mus.	Totals
1873	1										1
1874	2										2
1875	4										4
1876	7	5									12
1877	2										2
1878	12										12
1879	3	5									8
1880	7	2									9
1881	5										5
1882	2	1									3
1883	3	2									5
1884	3										3
1885	3										3
1886	9	3									12
1887	3	3									6
1888	5	4									9
1889	4										4
1890	1	1									2
1891	2										2
1892											
1893											
1894	1										1
1895											
1896	1										1
1897	1										1
1898			1								1
1899	3										3
1900	4										4
1901	3										3
1902	4	1									5
1903	4										4
1904	4		2								6
1905	2										2
1906	2										2
1907											
1908	1		2								3
1909	6										6
1910	2		1								3
1911	3										3
1912	1		1								2
1913	2		2								4
1914	1										1
1915	2	1	1								4
1916	5			1							6
1917	5										5
1918	1	2		1	1						5
1919											
1920	4	2									6
1921	5	2									7
1922	11	2									13
1923	13	1				1					15
1924	15	2		2			1				20
1925	14	3		3	2						22
1926	21	3		6			2				32
1927	27	1		5		1	1	1			36
1928	30	3		5			1	2			41
1929	36	5		3			1				45
1930	64	4		7				1			76
1931	39	29			1	1	2				72
1932	33	29			2			1	1		66
1933	46	19			3		2	1	2		73
1934	51	24					1				76
1935	62	23					4		2		91
1936	65	20			1		1				87
1937	76	19					2				97
1938	94	24									118
1939	119	22			1		1		1		144
1940	110	38					8				156
1941	132	39				1	4	1		1	178
1942	125	41					3			2	171
1943	71	14								1	86
1944	28	8									36
1945	23	7									30
1946	44	13						1	1	1	60
1947	105	72					4			1	182
Totals	1599	499	10	33	11	4	38	8	7	6	2215

Doctor's Degrees

	Doctor of Philosophy
1902	1
1907	1
1932	6
1933	5
1934	3
1935	10
1936	4
1937	2
1938	2
1939	3
1940	4
1941	4
1942	3
1943	3
1945	1
1947	3
TOTAL	55

Professional Degrees

YEAR	Civil Engineer	Mechanical Engineer	Electrical Engineer	Chemical Engineer	Engineer of Mines	TOTALS
1889	3					3
1897	1					1
1898	1					1
1909		1	2			3
1915	3					3
1918	1					1
1920	1					1
1921		1				1
1924	1		1			2
1928		1				1
1929		1				1
1930			1			1
1932	1					1
1933	1	1				1
1934				1		2
1937		1				1
1938	1		2			1
1940			1		1	3
1941					1	2
1945			1			1
1946				1		1
Totals	14	6	8	2	2	32

Honorary Degrees

YEAR	Doctor of Philosophy	Doctor of Divinity	Doctor of Laws	Doctor of Literature	Doctor of Civil Laws	Doctor of Science	TOTALS
1875	1						1
1883		2	1				3
1885			1				1
1886			3				3
1887		1					1
1888	1	1	2				4
1889	1	2	1				4
1890	2		1				3
1891	1	4	1				6
1892	1	2	1				4
1893			1				1
1894	3	3		1			7
1896	1	1	1				3
1897			1		1		2
1919			15		2		17
1921			1				1
1928			1				1
1929			3				3
1932			2				2
1933			2				2
1934			1				1
1937			1				1
1938			1			1	2
1939			1	1			2
1940			3			1	4
1941			1				1
1942			3			1	4
1945			1				1
Totals	11	16	50	2	3	3	85

THE CLASSIFIED ENROLLMENT

In the Colleges and Schools

A. The Summer Session, 1947

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. & H. E.	26	13	39	65	13	78	65	5	70	39	5	44	195	36	231	.....	2	2	195	38	233
Arts and Sciences	150	53	203	254	53	307	364	41	405	158	23	181	926	170	1,096	10	28	38	936	198	1,134
Education	14	23	37	5	10	15	.....	.....	.....	.....	.....	.....	19	33	52	.....	5	5	19	38	57
Engineering	83	.....	83	136	2	138	294	.....	294	83	.....	83	596	2	598	4	.....	4	600	2	602
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	562	374	936	.....	.....	.....	562	374	936
Journalism	6	6	12	12	6	18	.....	.....	.....	.....	.....	.....	18	12	30	.....	.....	.....	18	12	30
Law	21	1	22	74	1	75	39	.....	39	.....	.....	.....	134	2	136	.....	.....	.....	134	2	136
Medicine	.....	2	2	.....	1	1	.....	.....	.....	.....	.....	.....	.....	3	3	.....	.....	.....	.....	3	3
Mines	13	.....	13	15	.....	15	25	.....	25	13	.....	13	66	.....	66	.....	.....	.....	66	.....	66
Music	3	7	10	2	6	8	2	4	6	3	.....	3	10	17	27	1	3	4	11	20	31
Pharmacy	11	5	16	18	1	19	14	1	15	1	.....	1	44	7	51	.....	.....	.....	44	7	51
Phys. Ed. and Athletics	12	6	18	24	1	25	23	4	27	15	1	16	74	12	86	.....	.....	.....	74	12	86
Total	339	116	453	605	94	698	826	55	881	312	29	341	2,644	668	3,312	15	38	53	2,659	706	3,365

B. The First Semester (September to January), 1947-48

Agr., For. and H. E.	61	44	105	104	46	150	223	46	269	139	62	201	527	198	725	10	5	15	537	203	740
Arts and Sciences	284	123	407	418	145	563	962	213	1,175	714	228	942	2,378	709	3,087	18	38	56	2,396	747	3,143
Education	15	18	33	19	17	36	.....	.....	.....	.....	.....	.....	34	35	69	.....	.....	.....	34	35	69
Engineering	113	1	114	280	4	284	581	1	582	238	1	239	1,212	7	1,219	2	.....	2	1,214	7	1,221
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	256	166	422	.....	.....	.....	256	166	422
Journalism	13	13	26	28	7	35	.....	.....	.....	.....	.....	.....	41	20	61	1	.....	1	42	20	62
Law	54	2	56	85	1	86	145	4	149	.....	.....	.....	284	7	291	.....	.....	.....	284	7	291
Medicine	19	8	27	30	10	40	.....	.....	.....	.....	.....	.....	49	18	67	.....	.....	.....	49	18	67
Mines	15	.....	15	35	.....	35	66	.....	66	36	.....	36	152	.....	152	1	.....	1	153	.....	153
Music	4	17	21	6	11	17	11	14	25	14	15	29	35	57	92	1	3	4	36	60	96
Pharmacy	21	7	28	28	5	33	29	2	31	28	5	33	106	19	125	.....	.....	.....	106	19	125
Phys. Ed. and Athletics	24	14	38	41	21	62	74	28	102	66	12	78	205	75	280	.....	.....	.....	205	75	280
Total	623	247	870	1,074	267	1,341	2,091	308	2,399	1,235	323	1,558	5,279	1,311	6,590	33	46	79	5,312	1,357	6,669

C. The Second Semester (January to June), 1947-48

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. and H. E.	70	47	117	110	35	145	204	43	247	112	57	169	496	182	678	9	3	12	505	185	690
Arts and Sciences	381	128	509	516	154	670	760	182	942	556	211	767	2,213	675	2,888	25	45	70	2,238	720	2,958
Education	13	25	38	24	18	42	.....	.....	.....	.....	.....	.....	37	43	80	.....	.....	.....	37	43	80
Engineering	137	1	138	328	2	330	466	.....	466	200	.....	200	1,131	3	1,134	1	.....	1	1,132	3	1,135
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	282	166	448	.....	.....	.....	282	166	448
Journalism	17	13	30	27	8	35	.....	.....	.....	.....	.....	.....	44	21	65	1	.....	1	45	21	66
Law	64	2	66	72	1	73	93	2	95	.....	.....	.....	228	5	233	.....	.....	.....	228	5	233
Medicine	19	9	28	27	11	38	.....	.....	.....	.....	.....	.....	46	20	66	.....	.....	.....	46	20	66
Mines	24	.....	24	46	.....	46	59	.....	59	31	.....	31	160	.....	160	.....	.....	.....	160	.....	160
Music	5	18	23	5	13	18	9	10	19	12	10	22	31	51	82	1	2	3	32	53	85
Pharmacy	25	5	30	20	4	24	30	2	32	23	4	27	98	15	113	.....	.....	.....	98	15	113
Phys. Ed. and Athletics	29	22	51	55	16	71	62	26	88	43	19	62	189	83	272	.....	.....	.....	189	83	272
Total	784	270	1,054	1,230	262	1,492	1,683	265	1,948	977	301	1,278	4,955	1,264	6,219	37	50	87	4,992	1,314	6,306

D. The Academic Year (September to June), 1947-48

Agr., For. and H. E.	61	44	105	106	48	154	232	48	280	150	64	214	549	204	753	12	5	17	561	209	770
Arts and Sciences	290	125	415	435	152	587	996	221	1,217	787	237	1,024	2,508	735	3,243	24	55	79	2,532	790	3,322
Education	16	20	36	19	21	41	.....	.....	.....	.....	.....	.....	35	41	76	.....	.....	.....	35	41	76
Engineering	113	1	114	282	4	286	603	1	604	253	1	254	1,251	7	1,258	2	.....	2	1,253	7	1,260
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	312	202	514	.....	.....	.....	312	202	514
Journalism	13	13	26	29	7	36	.....	.....	.....	.....	.....	.....	42	20	62	1	.....	1	43	20	63
Law	54	2	56	88	1	89	145	4	149	.....	.....	.....	287	7	294	.....	.....	.....	287	7	294
Medicine	19	8	27	30	12	42	.....	.....	.....	.....	.....	.....	49	20	69	.....	.....	.....	49	20	69
Mines	15	.....	15	35	.....	35	68	.....	68	39	.....	39	157	.....	157	1	.....	1	158	.....	158
Music	4	17	21	6	11	17	11	14	25	15	15	30	36	57	93	1	3	4	37	60	97
Pharmacy	21	7	28	29	5	34	29	2	31	28	5	33	107	19	126	.....	.....	.....	107	19	126
Phys. Ed. and Athletics	25	15	40	41	21	62	78	28	106	75	13	88	219	77	296	.....	.....	.....	219	77	296
Total	631	252	883	1,100	282	1,382	2,162	318	2,480	1,347	335	1,682	5,552	1,389	6,941	41	63	104	5,593	1,452	7,045

E. The Summary for 1947-48

	Senior			Junior			Sophomore			Freshman			Total			Special			Grand Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Agr., For. and H. E.	68	50	118	110	50	160	236	49	285	157	64	221	571	213	784	12	6	18	583	219	802
Arts and Sciences	330	135	465	450	159	609	1,023	225	1,248	800	241	1,041	2,603	760	3,363	30	74	104	2,633	834	3,467
Education	25	32	57	21	28	49	.....	.....	.....	.....	.....	.....	46	60	106	.....	5	5	46	65	111
Engineering	133	1	134	284	4	288	609	1	610	264	1	265	1,290	7	1,297	4	.....	4	1,294	7	1,301
Graduate	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	740	504	1,244	.....	.....	.....	740	504	1,244
Journalism	13	14	27	29	7	36	.....	.....	.....	.....	.....	.....	42	21	63	1	.....	1	43	21	64
Law	60	2	62	90	1	91	150	4	154	.....	.....	.....	300	7	307	.....	.....	.....	300	7	307
Medicine	19	8	27	30	11	41	.....	.....	.....	.....	.....	.....	49	19	68	.....	.....	.....	49	19	68
Mines	19	.....	19	35	.....	35	69	.....	69	40	.....	40	163	.....	163	1	.....	1	164	.....	164
Music	5	19	24	7	12	19	11	16	27	14	15	29	37	62	99	1	5	6	38	67	105
Pharmacy	24	7	31	31	5	36	29	2	31	28	5	33	112	19	131	.....	.....	.....	112	19	131
Phys. Ed. and Athletics	27	17	44	43	21	64	80	29	109	75	13	88	225	80	305	.....	.....	.....	225	80	305
Total	723	285	1,008	1,130	298	1,428	2,207	326	2,533	1,378	339	1,717	6,178	1,752	7,930	49	90	139	6,227	1,842	8,069

Extension and Short Courses

COURSES AT MORGANTOWN:			
Appalachian Gas Measurement Short Course	430	.....	430
Coal Mining Short Course	37	.....	37
Fire School	203	.....	203
Junior Farmers Week	160	.....	160
Vocational Agriculture Non-Credit Students	3	.....	3
Total Enrollment at Morgantown	7,060	1,842	8,902
University Extension of Collegiate Grade	293	522	815
EXTENSION			
Coal Mining Short Course	146	.....	146
Coal Mining Night Classes	1,433	.....	1,433
Dairy Farming	308	.....	308
Fire Service	757	.....	757
Instruction for Institutional On-The-Job Instructors	368	.....	368
Maintenance	73	.....	73
Oil and Gas	161	.....	161
Grand Total	10,599	2,364	12,963

THE GEOGRAPHICAL DISTRIBUTION OF RESIDENT ENROLLMENT, 1947-48

By States and Foreign Countries

Brazil	1	Minnesota	1
California	5	Missouri	3
China	4	Montana	1
Connecticut	3	New Jersey	37
Czechoslovakia	2	New Mexico	2
District of Columbia	13	New York	47
Florida	4	North Carolina	1
Greece	2	Ohio	63
Illinois	6	Pennsylvania	357
India	3	Puerto Rico	3
Indiana	3	Texas	4
Kansas	1	Turkey	2
Kentucky	8	Virginia	23
Louisiana	1	West Virginia	7414
Maine	1	Wisconsin	1
Maryland	44		
Massachusetts	6	TOTAL	8069
Michigan	3		

By West Virginia Counties

Barbour	100	Mingo	65
Berkeley	61	Monongalia	1497
Boone	49	Monroe	32
Braxton	60	Morgan	24
Brooke	96	Nicholas	83
Cabell	114	Ohio	388
Calhoun	27	Pendleton	30
Clay	56	Pleasants	32
Doddridge	24	Pocahontas	50
Fayette	133	Preston	241
Gilmer	53	Putnam	28
Grant	22	Raleigh	194
Greenbrier	131	Randolph	109
Hampshire	36	Ritchie	81
Hancock	172	Roane	65
Hardy	21	Summers	36
Harrison	558	Taylor	121
Jackson	63	Tucker	53
Jefferson	30	Tyler	56
Kanawha	759	Upshur	70
Lewis	103	Wayne	25
Lincoln	12	Webster	36
Logan	121	Wetzel	113
McDowell	113	Wirt	26
Marion	432	Wood	176
Marshall	160	Wyoming	43
Mason	26		
Mercer	142		
Mineral	75	TOTAL	7414

INDEX

A

Abbreviations 90
Absences 60, 62
Absentia work 59
Academy of Science 88
Accounting 157
Administration, Council of 8
Administration, Officers of 7-9
Admission 42, 44, 47
Admissions, Committee on 31
Advanced standing 47
Advertising-management curriculum 260
Adviser, 50, 63
Adviser: agriculture 95; arts and sciences 129; duties of 50, 63; education 45; fraternity 32; graduate work 253; home economics 116; sorority 32
Aeronautical engineering 224, 242
Agricultural biochemistry 100
Agricultural economics 101
Agricultural engineering 102
Agricultural Experiment Station 25, 91
Agricultural Extension Division 27, 92
Agricultural mechanics 98
AGRICULTURE, FORESTRY, AND HOME ECONOMICS, COLLEGE OF:
Courses 99, 114, 121
Courses credited toward A.B. degree 129
Degree requirements 94
General information 37, 91
Science curriculum 93
Two-year curriculum 94
Agriculture 91, 99
Agronomy 103
Aid to students 71
Anatomy 272
Animal husbandry 104
Animal pathology 105
Applied arts 123
Applied music 278
Armory 35
Arrangement of courses 90
Art 143
Arts and agriculture course 138
Arts and law course 137
Arts and medicine course 133
ARTS AND SCIENCES, COLLEGE OF:
Courses 141
Degree requirements 129
Electives in other colleges 129
General information 37, 126
Preprofessional courses 135
Assemblies 64
Assistant professors 14
Assistants and technicians 20
Associate professors 12
Associated Women Students 65
Associations 65, 83
Athletics: Council 30; staff 30; trophies 82; intramural 68; intercollegiate 69
Auditors 51

B

Baccalaureate degrees; conferred 311, 334; list of 58; requirements for 56
Bachelor of Arts degree: arts and law 137; arts and medicine 133; combined courses 133; conferred 311; regular course 131
Bachelor of Laws degree: conferred 318; requirements for 59, 267
Bachelor of Music degree: conferred 324; requirements for 59, 277
Bachelor of Science degrees: combined 133; conferred 315
Bacteriology 108, 272
Band, Eligibility for 65
Band instruments 284
Band music 39
Banking and finance 156
Bar, Admission to 268
Biochemistry 273
Biological sciences, Introductory course 142
Biological Survey 89
Biology 144
Board of Governors 6, 36
Board of Governors scholarships, Committee on 30
Board and lodging 41
Book store 41
Botany 146
Broadcasting 41
Buildings 35
Business administration 153
Business management 156

C

Cafeteria 42
Calendar 4, 5
Campus, Map of 2
Ceramic engineering 243
Certificate, Junior 128
Certification of entrance units 43
Certification regulation: see Note on page 204
Chemical engineering 226, 243
Chemistry 147
Child care 124
Church centers 65
Civil engineering 228, 245

Class advisers, see Advisers
Class load 50
Classical civilization 153
Classics 151
Classification of students 58
Clothing 123
Clubs 85
Coal conference on combustion 221
Coal mining 236, 251
Combined courses in two colleges 133, 137, 138, 289
Committee on scholarship, Duties of 63
Committees 30
Concerts and recitals, Committee on 277
Conditional admission 46
Conditions 61
Conservation 98, 106
Contents, Table of 3
Convocation 64
Correspondence work, Credit for 48
Costs 52-55
Council of Administration 8, 36
Council, Graduate 8
Council, Student 65
Courses of instruction 91
Credits, Definition of: college 49; entrance 43
Credits required for baccalaureate degree: all colleges 58
Curricular requirements 90

D

Dairy husbandry 106
Dairy manufactures 97
Dean of women 64
Degrees, Baccalaureate 56
Degrees, Classification of 58
Degrees conferred, 1870-1947: bachelor's 334; doctor's 336; honorary 336; master's 335
Degrees conferred 311
Degrees, General regulations concerning 55
Degree, Graduate 59, 253
Degrees in: See under name of college or school
Degrees, Professional 60
Degrees, Resident requirements for: graduate 253; undergraduate 57
Degrees, Undergraduate 56
Delinquent students 62
Demonstration high school 23, 202
Deposits 54
Description of the University 33
Director of student affairs 64
Discipline 62
Dispensary 69
Doctor's degree requirements 255
Doctor's degrees conferred 336
Dormitories 9, 41
Drawing 249
Duties of advisers, of Committee on Scholarship, of instructors 63

E

Economics and business administration 153
EDUCATION, COLLEGE OF:
  Admission 45, 203
  Courses 204
  Degree requirements 203
  General information 37, 202
  Graduate professional curricula 211
  Laboratory Elementary School 202
  University High School 23, 35, 202
Elective units 43
Electrical engineering 230, 247
Eligibility in activities 65
  University Band 65
Embryology 272
Employment service 71
ENGINEERING AND MECHANIC ARTS, COLLEGE OF:
  Courses 242
  Courses credited toward A.B. degree 129
  Degree requirements 222
  Extension in industrial sciences 219
  General information 37, 216
  Mining extension 29, 219
Engineering Experiment Station 28, 218
English: courses 164; honors 163
Enrollment, Summary of 337
Enrollment, Geography of 340
Ensemble courses 284
Entomology 107
Entrance 43
Examination, Medical 49
Examinations 60
Exemptions, Military 39
Expenses 52-55
Experiment Station, Agricultural 25, 91; Engineering 28, 218
Extension courses in agriculture 92; mining and industrial education 219; home economics 92
Extension staff; agricultural 27; industrial and mining 29; University 24
Extension, Standing Committee on University 30; organization of 40; collegiate grade 55

F

Faculty, University; according to rank 99; Graduate 36; organizations 86

Failure in course 61
Farms, Department 35
Farm and Home Week 92
Farm practice 100
Fees 52-55
Fellows 20
Fellowships 78
Food and nutrition 121
Forestry 110-116
Forest Management 111
Forest Utilization 111
Foundation of University 33
Foundations, Religious 65
Fraternities 85
Fraternity advisers 32
Fraternity scholastic records, Committee on 30
French 187
Full-time student fees 52
Funds 36

G

Gas engineering 238
Gas measurement short course 220
General engineering 248
General information 33
Genetics 103
Geography 169
Geological and Economic Survey 88
Geological engineering 238
Geological, mineralogy, and geography 167
German 170
Gifts 72
Governing boards 6, 36
Government associations, Student 64
Government of the University 36
Grades, Reports on 61
Grading, System of 56
Graduate assistants 20
Graduate Council 8
Graduate degrees 59
GRADUATE SCHOOL:
Admission 47
Council 8
Degrees 59, 253
Faculty 36
General regulations 252
Grants 73
Greek 153
Grounds 35

H

Health education 300
Health and child care 124
Health Service, Student 9, 69
High School, University Demonstration; Staff 23; work of 202
Histology 272
History of University 33
History 171
Home economics 116-125; education 125
Home economics in Arts and Sciences curriculum 174
Home management 124
Honor points 56
Honor societies 83
Honorary degrees conferred 336
Horticulture 107
Hospital service 70
Humanities course 141

I

In absentia work 59
Industrial engineering 249
Industrial Extension staff 29
Industrial pharmacy 288
Infirmary 35, 69
Institutions associated with the University 88
Instruction staff 9
Instructional policies and practices, Committee on 31
Instructors, Duties of 63; List of 17
Intercollegiate athletics 69
Interfraternity scholarship trophy 82
Institution management 122
Interpretation 199
Intramural athletics 68
Introductory courses 141
Italian 189

J

JOURNALISM, SCHOOL OF:
Admission 45, 258
Courses 263
Degree requirements 259
General information 37, 257
Junior certificate 128

L

Laboratory Elementary School 24, 202
Laboratory deposits 54
Languages and literatures: Classics 151; English 162; German 170; Romance 186
Late registration 50
Latin 151
LAW, COLLEGE OF:
Admission 44
Advanced standing 47
Combined course 137
Courses 265
General information 37, 264
Students in other college admitted to law course 268
Law Quarterly, West Virginia 269
Lecturers 20
Library science 175

Library 39; standing committee 31; staff 24
Living accommodations 41
Loan funds 78
Location of University 34
Lodging 41
Lower division, College of Arts and Sciences 131

M

Machine design and construction 249
Marketing and merchandising 157
Marking system 56
Marriages, Student 64
Master's degrees conferred 326
Master's degrees, Requirements for 255
Mathematics 176
Maximum and minimum work 50
Mechanical engineering 234, 249
Mechanics 251
Medals 83
Medical examination 49
Medical service 69
Medical technology 139
Medicine 275
MEDICINE, SCHOOL OF:
  Admission 45
  Combined courses 133
  Courses 272
  Degree requirements 270
  Fees 53
  General information 37, 216
Men's dormitory 35, 41
Metallurgy 243
Midsemester reports 60
Military band 39
Military Science and Tactics, Division of: administration and instruction 37; courses in 276; staff 29
Mineralogy 168
MINES, SCHOOL OF:
  Courses 251
  Courses credited toward A.B. degree 129
  Degree requirements 236
  General information 37, 216
Mining Extension 29, 219
Mining engineering 236, 251
MUSIC, SCHOOL OF:
  Admission 46
  Advanced standing 48
  Concerts and recitals 41
  Courses 282
  Courses credited toward A.B. degree 129
  Degree requirements 277
  Fees 53-54
  General information 37, 277
Music organizations 41

N

Neuro-anatomy 272
Numbering courses, Plan for 50, 90
News-editorial curriculum 269

O

Obstetrics 275
Officers of the University 7, 8
Oil and gas engineering 238
Orchestra, University 41, 86
Orchestral instruments 284
Organization of the colleges, schools, and divisions 37
Organizations and societies 83, 85, 86, 88

P

Part-time student fees 52
Pathology 273
Petroleum engineering 238
Pharmacists register 72
Pharmacology 274
PHARMACY, COLLEGE OF:
  Advanced standing 48
  Combined courses 288
  Courses 290
  Degree requirements 287
  Fees 53
  General information 37, 286
Pharmacy, University 69
Philosophy 179, 181
Physical education, service programs 67, 295, 296
PHYSICAL EDUCATION AND ATHLETICS, SCHOOL OF:
  Courses 298
  Courses credited toward A.B. degree 129
  Degree requirements 294
  General information 37, 293
  Intramural athletics 68
  Service programs 67, 295, 296
Physical plant 35
Physical sciences, introductory course 142
Physical training 67
Physics 182
Physiology 273
Piano 284
Pipe organ 284
Placement bureau, Teacher 72
Placement guidance 71
Plant pathology 108
Political science 184
Portuguese 189
Poultry husbandry 105
Power engineering 249
Practice court 267
Practice teaching 202

Predental courses 133
Preeducation adviser 202
Preeducation course 135
Prejournalism course 136
Prelaw course 137
Premedical course 132
Prenursing curriculum 135
Preprofessional social work 135
Prescribed and elective unites 43
Prizes 80; standing committee on 31
Probation rules 62
Professional curricula, Graduate 211
Professional degrees in engineering 60
Professional societies 83, 86
Professors 9
Professors, Assistant 14
Professors, Associate 12
Psychology 179
Public exercises and entertainments, Committee on 31
Public hygiene 272
Public-school music 281
Public speaking 199
Publications, Student: Committee on 31; list of 88
Publications, University: Committee on 31; list of 87

R

Radio, Committee on 31; courses 209
Recitals 41
Recreation 68, 301
Reentry after withdrawal 51
Refunding of fees 55
Registration 49
Registration fees 52
Religious foundations and societies 65
Requirements for degrees 55; **see** "Degree" under name of college or school
Reports 61
Research: Graduate Council 8; Graduate School 254; Committee on 31
Residence requirements: Graduate School 253; undergraduate colleges and schools 57
Residence halls 9
Retail pharmacy 287
Return of books to Library 51
Romance languages and literatures 186
Rooms and boarding places 41
Rules and regulations 62
Rural organization 110
Russian 190

S

Sanitary engineering 228, 245
Schedules 90
Scholarship, College committees on 32
Scholarships 72
Scholastic standing 56
Secretarial studies 156
Senate 36; committees of 31; Executive committee of 30
Service programs in physical education 67, 295, 296
Short courses and special schools 92
Social center for women 64
Social life of students 67
Social sciences, Introductory course 142
Social work 190; preprofessional 135
Societies 65, 83
Societies, Honor 83
Sociology 195
Soils 103
Sororities 32
Sorority scholastic records: Committee on 31
Space allocation, Committee on 31
Spanish 188
Special admission requirements 44
Special fees 53
Special students 46
Speech 197; correction 200
Staff of instruction, research, and extension 7-30
Standing, Advanced 47
Standing committees: college 32; University 30
State Road Commission 89
Student activities 65, 83-86
Student affairs, Committee on 30, 36; director of 64
Student aid 71
Student center 65
Student concerts 41
Student Council 65
Student deans 64
Student health service 8, 69
Student marriage 64
Student organizations 65, 85; Committee on 31
Student placement 71
Student publications 88
Student social life 67
Student teaching 206
Student welfare 64
Substitution for required courses 51
Summary of University enrollment 339
Summer Session: general information 37; committee on 32
Surgery, Introductory 275
Suspension 62

T

Teachers bureau 72
Teachers certificates: **see** Note on

page 204
Teacher placement 72
Teacher training, Committee on 32
Technicians 20
Tenure and retirement, Committee on 32
Textiles and clothing 123
Theatre 201
Theory of music 282
Trophies 82
Tuition, Rates of 52

U

Undergraduate requirements for admission 42
Units, Entrance 43
University Demonstration High School: building 35; staff 23; work of 202
Upper division, Arts and Sciences 132

V

Veterans 48, 140
Violin 284
Visitors 51
Vocational agriculture 97
Vocational home economics 119
Vocational mining extension 220
Voice 283

W

Welfare, Student 64
Wildlife management 111
Withdrawal from the University 51
Woman's Hall 35, 41
Women, Dean of 64
Women, Living accommodations for 41
Wood Utilization 111

Y

YMCA 67
YWCA 67

Z

Zoology 147